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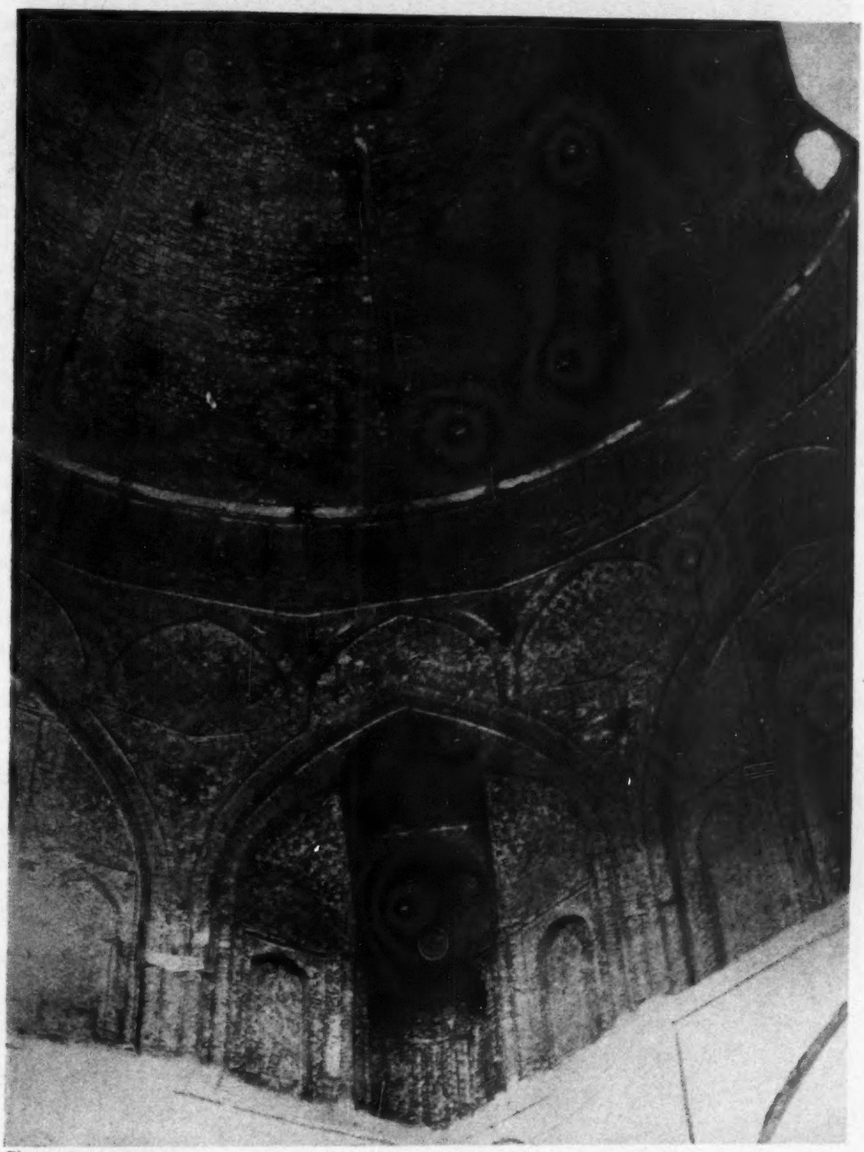


Photo: Dr. A. U. Pope.

Great Dome Chamber, Masjid i Jami, Isfahan (11th century). (See page 200.)

MEETINGS

FRIDAY, *January* 23.

Chartered Surveyors' Institution (City and Eastern London Branch). Dinner at Frascati's Restaurant, W.1. 7.15 p.m.

Institute of Fuel. Presentation of the Melchett Medal. At the Institution of Civil Engineers, Gt. George-street, S.W.1. 6.30 p.m.

MONDAY, *January* 26.

Architectural Association. Mr. R. P. Gossop on "The Place of the Designer in Commerce." 7 p.m.

TUESDAY, *January* 27.

Northants, Beds, and Hunts Association of Architects. Annual Dinner. At the George Hotel, Luton. 6.45 p.m.

Incorporated Association of Architects and Surveyors. Mr. S. E. Whitaker on "Norman Architecture." 7 p.m.

National Federation of Building Trade Employers. Annual Dinner. At the Hotel Victoria, W.C.2 7.15 p.m.

WEDNESDAY, *January* 28.

L.C.C. Central School of Arts and Crafts. Sir Banister Fletcher, P.R.I.B.A., on "Mediæval Period." 6 p.m.

Royal Society of Arts. Very Rev. Albert Baillie on "The Restoration of St. George's Chapel, Windsor Castle." 8.30 p.m.

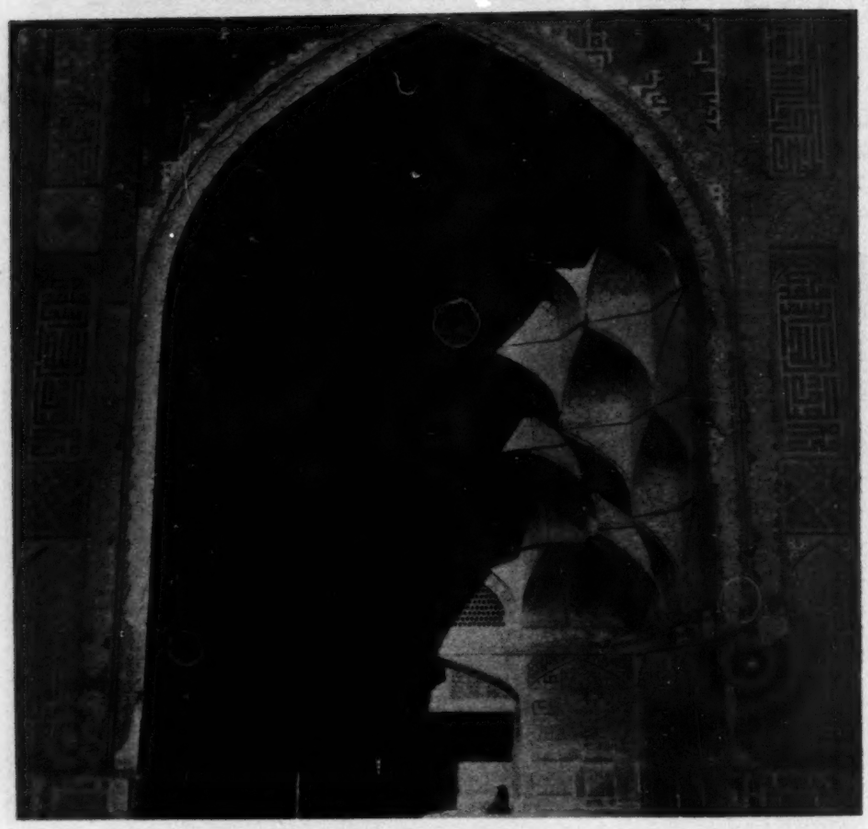
THURSDAY, *January* 29.

Society of Antiquaries. Dr. R. E. M. Wheeler on "Excavations at Verulamium." 8.30 p.m.

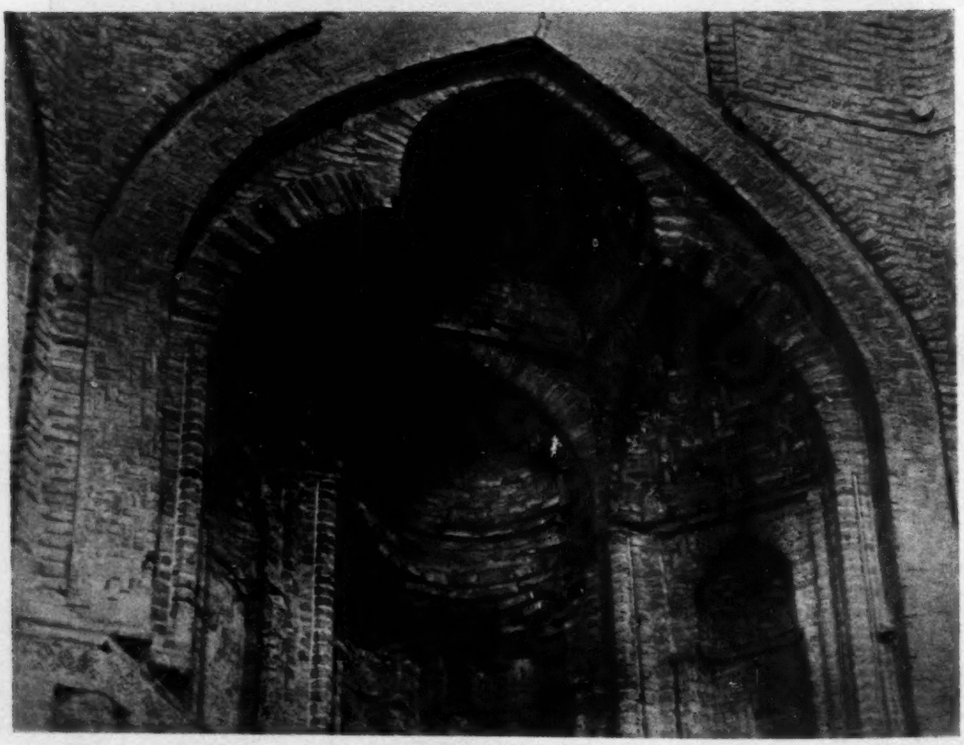
West Yorkshire Society of Architects. Debate by Messrs. P. Lingwood and E. M. Rice on "That Architecture should be State Controlled." At Leeds. 7 p.m.

London Society. Visit to the White Heather Laundry, Stonebridge Park, N.W.10. 2.30 p.m.

Institute of Arbitrators. Mr. W. T. Creswell on "Evidence in Arbitrations." At Queen's College, Birmingham. 5.30 p.m.



North-West Portal.



Squinch, small dome chamber (dated 1088).

Masjid i Jami, Isfahan.

(See page 200.)

RATIONALISATION

THE passing of Lord Melchett is a reminder that the new word which we have chosen for a headline is more than one of those comfortable words which politicians often choose as a label for barren policy; for rationalisation was a very real thing to him, and has been shown by him to be a very real thing for us. Probably the shortest explanation of its meaning would be to describe it as a weeding of the commercial garden, which has long remained untended.

A correspondent writing to us says: "Capitalism, the system round which our social order has been centred, may be standing on its defence, and the ultimate verdict, which may necessitate some change, depends very much upon how, and how quickly, our economic system can free itself of such defects as may have grown out of it. We are all tired of the continual ups and downs of the commercial index, and have become almost fearful of the boom to which a reaction of depression seems inevitable. And we can talk like that in the midst of one of the most stubborn periods of depression in the commercial history of this country."

In this building industry of ours we are perhaps better placed to judge the average condition of trade as a whole than in any other trade. We are in direct contact with capital and labour, and directly interested in a score of industries. In what way can we, in this great industry, set a fashion for sensible thought and sensible action, which are the prime essentials of rationalisation? Few can be satisfied that the actual trade of building is organised to its utmost efficiency. We hear continually that tenders for many building works vary to an extraordinary degree. This alone indicates some loose peg in the structure of organisation, though it generally applies to the smaller class of building where no quantities are supplied other than those each builder prepares or foregoes for himself. Within certain broad limits the cost of building at any specific period and in any specific district should be more or less a constant factor, and the fact that the evidence appears all to the contrary in the smaller types of building suggests many possibilities, none of which stand as healthy signs. Some of the builders may be depending on guesswork for their estimates for small jobs. At the other extreme, others may be applying to simple things a too elaborate and comprehensive system of costing, which becomes a charge on the costs themselves, appreciable in these simple cases, where they are submerged in the larger works for which the system was designed. There seems room here for some better measurement of the realities of small building so that we may know where we stand; for nothing checks trade so much as uncertainty.

Again, we cannot but be struck with the enormous growth in numbers among the separate building firms of all districts since the War years. Many of these new firms represent capable builders' foremen and clerks of works, who have entered the business fully equipped with the intelligence, responsibility and practical experience to make first-class master builders. Such men are welcome to the trade, and so long as the market remains unflooded they are wise to launch their own ships. But among other of the newcomers are men who have been attracted to building by no other consideration than the apparent prosperity and advancement which the capable builder generally achieves. Some of them are devoid of the technical knowledge which an ordinary handy man does not possess; lacking in any financial stability, and sometimes lacking also, we fear, a sense of public responsibility or integrity. Those men are passing through their worst time now, and many of them will "go through the mill," and we shall hear no more from them. How to prevent their return, when the tide of trade turns, as it must in good time, is one of the problems of rationalisation which the building trade has to face. To this small minority is due much of the hard things which are spoken of the trade in uninformed circles, and it is to the advantage of everyone that builders should keep their ranks for the efficient.

On another point, we should preface our remarks with the opinion that this is one adequately observed by most of the successful builders of our time; but it is also one which seems frequently overlooked among the smaller firms. We refer to the wise choice of foremen, and the placing of implicit confidence in them when once chosen. We are convinced that delays and makeshifts often do occur in small work through lack of confidence in the working foreman. One of these who is given *carte blanche* to order for himself, in the best market he knows, such goods which are found to be urgently wanted and which cannot await the normal channel of delivery, is not likely to fail his employer, or at any rate he is not likely to have a second chance. But the one who feels that he will be censured for spending a shilling or two extra in first cost, be his reason for the order the best in the world, cannot do the fullest justice to his employer. We believe there are many firms where this self-evident principle has yet to be fully appreciated, and here is obviously a direction in which such firms may look for some means of improving their efficiency.

In the matter of speeding up the actual building process, we need to apply the utmost caution. The traditions of building have not been lightly formed, but extend back through centuries of experience gained through many failures and the discovery of many limitations. Many of the recent discoveries in the direction of new material and method have yet to prove themselves, while the old methods and materials stand firmly upon a basis of successful experience.

In the supply and delivery of manufactured or partially manufactured articles to the building, there is yet more room for rationalisation. The more the organisation of such manufactures and their dispatch and delivery can be perfected, the more frequent will be delays which sometimes hold up the smooth progress of the job. Bound up in this question we find ourselves immediately interested in the efficiency of rail and road transport, upon which the findings of the Royal Commission recently published are of immediate interest. Delays and mislayings *en route* are disturbances to the building process which are often laid at the door of the manufacturer, and unjustly. It should be possible under any properly organised system of transport to dispatch a consignment of goods from the north of England, and be sure of its delivery in the south within a few days. At present no such certainty can be counted on.

To the architects we may say that this is a question in which they also can play their part. Specific and complete descriptions of the works upon which they require tenders will do much to remove uncertainty in their level; and we would also urge upon them the common justice of advising the preparation of bills of quantities for jobs of any considerable value.

But generally speaking, the whole movement implies an attempt on all hands, for the several parties to the social scheme, to recognise and ease the difficulties of others wherever this may lie in their power; and so soon as this spirit of good will has permeated the whole social order we may expect a general increase in efficiency which will be the main motive power of commerce. If this arrives we may live to thank, in some degree, the lean years through which we are now passing for having taught us such an excellent lesson.

NOTES

The Guildford Competition.

Some surprise will doubtless be felt at the selection of those who are to enter into a competition for the design and erection of a Surrey Cathedral at Guildford. Whether the selection of the five chosen architects has been influenced by special designs they have prepared for the cathedral we do not know, but if the choice of architects has been based on the known reputations of architects, it is not easy to understand how the selection has been so limited. All the selected architects have given evidence of their ability, but in such a short list of five as have been chosen as competitors, the selection must have been a difficult one, and some well-known names of high reputation are not included. The names of the five selected architects we publish on p. 182.

Some Suggestions.

Judging from some of the many designs submitted there is no doubt plenty of ability to design this cathedral, and there are designs the profession would, we believe, have been glad to see recognised, notwithstanding the great confidence placed in the assessor and his advisers. Ingenuity of plans and novelty of treatment do not alone suffice for the production of a beautiful and dignified church. It is perhaps safe to assume that a plan which gives a large central area wherein a large congregation can both see and hear, is more likely to be in favour than the "long drawn aisles and fretted vaults," which one associates with the idea of a national church, but the religious feelings and beliefs associated with the English Protestant church will, one may hope and expect, find satisfaction in the results of this competition. We still think that the list of those finally selected to compete might well have included more competitors, even though the premiums had to be reduced, and even now we wonder if it is too late to include the names of certain recognised able church architects. We certainly hope some of the designs will be on exhibition for some little time. We think this would be an act of courtesy to the profession which would be much appreciated. The competition after all was one of some importance.

New Materials.

A matter of considerable importance to every architect and builder has just been raised by the appeal of an architect for help in contesting a law action for fees in consequence of faulty materials having been used in a certain contract, and the architect being held guilty of negligence. We assume that when architects specify certain materials, they have a knowledge of them; it would not do to use materials without first testing them. But at the same time there is surely a limit to what the architect's knowledge should be, especially where he has taken what appears to be all reasonable precautions. This is an age of progress, and new materials have to be tried if they are ever to become widely used, and someone has to use them first, though, of course, they should not be used without knowledge of their capabilities. If new materials had not been experimented with, the building industry would be very much behind the times; building costs would be much higher, and contracts would not be carried out so expeditiously and satisfactorily as they now are. Many architects have a preference for particular materials, and most of their jobs show their choice prominently; they know the worth of certain materials and believe in continually using them. Present-day building research is so thorough and painstaking that we are generally justified in using new materials and giving them a chance.

Development of Hastings.

The report on the general development plan of the Borough of Hastings has just been published. It has been prepared by Messrs. Thomas H. Mawson & Sons, and Messrs. Adams, Thompson and Fry, who are responsible for the preliminary report submitted in October, 1923. There is much of interest to architects in the latest report, for it includes recommendations for protecting Burton's fine terraces along the promenade. The architects and engineers of the Southern Railway are criticised for the plans for the new station. It is pointed out that there are many evils in the plan, which provides a very poor architectural setting, and that before long it will assume "the drab and forbidding aspect so unfortunately associated with railway stations in this country." It is strongly advised that there should be a Civic Centre giving expression to the united civic life of Hastings and St. Leonards. It is suggested that the site for this should be behind the White Rock Gardens and that the Town Hall should be in a commanding position, looking on the Bohemia Road. The report presents a graphic presentation of a policy for the gradual improvement and extension of a town of historical interest. If in the course of time the needs of the town change, the plan can be adjusted to meet the new conditions.

A Chinese Competition.

A prize of £600 was offered for the best design for adapting the design of Chinese buildings to modern local government requirements by the City Plan Commission of Greater Shanghai. It has been decided to develop a civic centre in Shanghai, and the architects of China have been asked to submit their ideas. In judging the various plans submitted, the general idea counted

Photo: Dr. A. U. Pope.

Vault, Masjid i Jami, Isfahan (11th century).

(See page 200.)

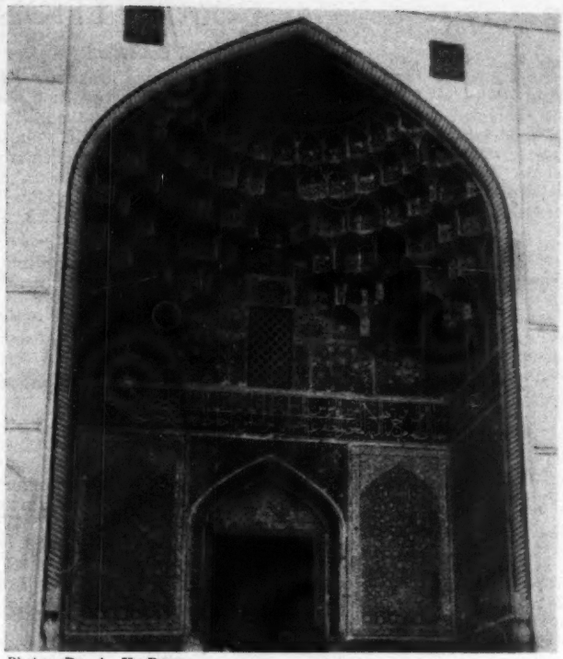


Photo: Dr. A. U. Pope.

Entrance, Masjid Sheik Luff Ullah, Isfahan.

(See page 200.)

50 per cent.; the Chinese architecture of the building elevations 30 per cent.; and the remaining 20 per cent. was divided between the individual plans and the cleverest way of carrying out the proposals for utilising the space available as imposed by the conditions. The winner scored 19 out of 20 points. The Chairman of the Jury reported that "this design is an excellent proof that it is entirely possible to secure, in Chinese architecture, the full economy and efficiency of modern building design without compromising in architectural purity by attempting to combine with it elements of essential foreign architecture . . . The units are skilfully built into small courts; the whole giving a grouping very satisfactorily Chinese in its architectural character . . . The traffic arrangements are excellent, both for circulation within the group and for passing through it, the cleverly planned tunnels carrying the two east-and-west transverse avenues underneath the main avenues being an especially interesting contribution . . . The plans of individual buildings show a good understanding of the requirements of a modern municipal group and are efficient and economically arranged, architecturally and structurally."

A Plan for London.

MANY of those who attended the joint meeting of the London Society and the Architecture Club, called on Friday last to discuss "A Plan for London," will have felt some disappointment that the speakers in the main confined their attention to minor aspects of the situation, and passed over what seemed to us to be the main issue. While on the speakers' behalf may be pleaded the futility of attempting to discuss a problem of such magnitude and importance in ninety minutes, the fact remains that Alderman Culpin and Professor Richardson—the first and last speakers—were the only two who seemed aware that a plan for London is in active course of preparation, and that all effort should be devoted to obtaining for the body that is responsible for that scheme—the Greater London Regional Planning Committee—statutory executive powers to put into operation what are at present only advisory powers. In view, therefore, of the existence of this plan, the recommendation passed (see page 202 for full context) that the meeting "is impressed with the vital importance of an authoritative plan to guide the development of London . . . and demands that immediate consideration will be given to practical measures for commencing such a plan . . ." strikes us as being in the nature of an anticlimax. If the justice of our remarks seems recognised, we trust that the London Society and the Architecture Club will as soon as practicable call another meeting to discuss ways and means "to obtain legislation for putting into practice the recommendations of the existent plan for London of the Greater London Regional Planning Committee."

Possibilities for Architects.

WHEN you call yourself an architect, it is obvious you may add a few letters to indicate subsidiary accomplishments, for we notice a firm styles itself "architects, merchants, etc." So what cannot reasonably be gathered in under head of merchandise may very well be absorbed under the title of architects, or etcetera.

Main Entrance, New County School for Boys, Beckenham and Penge.

MR. W. H. ROBINSON, F.R.I.B.A., Architect.

GENERAL NEWS

Professional Announcement.

Mr. Sydney W. Cranfield, F.R.I.B.A., architect and surveyor, has removed to 28, Bedford-square, W.C.1. Telephone : Museum 2420.

The Wallace Collection.

The newly decorated rooms at Hertford House (the Wallace Collection) are to be re-opened.

Architect's Estate.

Mr. Harold Bailey, F.R.I.B.A., Kingston Hill, Surrey, architect, left estate of the value of £10,153 (net personalty £4,540).

Blackpool Scheme.

A new entertainment enterprise, to cost in the neighbourhood of £500,000, is stated by the Blackpool Tower Co. to be contemplated.

Regional Development Committee.

The Minister of Health has appointed a committee, under the chairmanship of Viscount Chelmsford, to consider the reports issued by regional planning committees and to recommend what schemes of work can be put in hand with due regard to the return to the community from the expenditure incurred.

Engagement of Electrical Consultant.

The Lancashire County Architect, Mr. Stephen Wilkinson, F.R.I.B.A., 16, Ribblesdale-place, Preston, has been authorised by the Public Assistance Committee to engage the services of a consultant electrical engineer in connection with the electric wiring of the Guardians' Committee Offices at Ashton-under-Lyne.

Carlisle Development Scheme.

The City Council, at their meeting on January 12, adopted the £120,000 scheme for the erection of municipal offices and shops on the Gaol Site, certain details in regard to the building line being referred back to the General Purposes Committee for reconsideration. It will be remembered that a competition for a façade for this site was recently decided.

Proposed Town Hall, Salford.

Some months ago the special Committee of the Salford Town Council was furnished with an elevation for the proposed extension of the existing Town Hall in Bexley-square, but the Council asked that similar elevations should be supplied for schemes on other sites. Mr. H. S. Fairhurst, F.R.I.B.A., of Brown-street, Manchester, has now shown the Committee elevations for the erection of a new Town Hall at Peel Park, Leaf-square, and on the reclaimed ground opposite The Crescent. In each case the estimated cost of the buildings is in the neighbourhood of £300,000, but in the case of The Crescent site the expenditure would be at least another £100,000 on account of the levelling of the embankment and the building of a bridge over the river.

New Hospital, Harrow-on-the-Hill.

A visit of inspection of the new extensions to the hospital at Harrow-on-the-Hill took place on January 15, when a party of visitors were conducted over the new buildings. The new operating theatre, with X-ray photographs shown up by powerful beams enabling the surgeon to see the affected part from all angles, with alternative room for cases where darkness is needed, and the special care in regard to heating and ventilation applying throughout the new building, was the subject of particular commendation. The method of warming by an ingenious system of panels in the ceilings, eliminating the use of radiators, and giving control of temperature to 1 deg. Fahr. within any given area, was examined with interest. The architects are Messrs. Mitchell and Bridgewater, and the builder Mr. Harry Neal, of Northwood.

The Incorporated Association of Architects and Surveyors.

In the unavoidable absence of Sir Edwin Lutyens, R.A., F.S.A., who had left for India two days previously, Sir Robert Tasker presided at a recent Council meeting of this Association. He said the Association went from strength to strength, and to-day on their roll there were 1,766 members. There was every indication of resolution, vigour and determination among their members to further the causes for which they were formed. It would be generally agreed that the dangers which threatened to lower the standard of architecture were never greater than they were to-day. Although they did not wish to lay down rigid canons of taste or regard themselves as a final tribunal in art, it was their wish to maintain a high standard to revive, to vivify, and influence public opinion in the right direction. The assumption that any one particular body had the only right to be heard in connection with an enormous industry, employing more than 800,000 people, was a presumption incapable of defence.

Coat of Arms, New County School for Boys, Beckenham and Penge.

MR. W. H. ROBINSON, F.R.I.B.A., Architect.

COMPETITION NEWS

Guildford Cathedral.

The following architects have been selected for the final competition for the design of Guildford's new cathedral, to be built on Stag Hill :—Mr. W. J. Palmer Jones, of Pembroke-walk Studios, Pembroke-square, London; Mr. Harold Gibbons, of Abbey House, Victoria-street, Westminster; Messrs. Thomas Worthington & Son, Oxford-road, Manchester; Mr. A. G. Crimp, Gray's Inn-square, London; Mr. Edward Maufe, Raymond-buildings, Gray's Inn, London. Each will receive a premium of 500 guineas. A sub-committee will meet on January 23 to draw up conditions of the competition, which will probably be held in the summer.

Senior Schools Competition, Burton-upon-Trent.

The assessor in this competition, Mr. Herbert T. Buckland, F.R.I.B.A., has made the following award in the competition for designs for the new senior schools on the Clarence-street site, Burton-upon-Trent :—1st (£150), Messrs. G. Wyville Home & Shirley Knight, 37, Russell-square, London, W.C.; 2nd (£100), Messrs. F. S. Antliff & Son, Draycott, near Derby; 3rd (£50), Messrs. Nicol & Nicol, King's-court, 117, Colmore-row, Birmingham.

We illustrate the first and second premiated designs this week.

COMPETITIONS OPEN.

Fire station, on site in Bethel-street, Norwich, for T.C. Limited to Norfolk architects. Mr. R. Atkinson, F.R.I.B.A., assessor. Conditions from Mr. Noel B. Rudd, Town Clerk, Guildhall, Norwich. Dep. £1 1s.	Particulars published in "Builder."	Sending in date
Proposed Medical Clinic, Tower Bridge-road, Bermondsey, S.E. Premiums of £250, £150 and £50. Mr. E. Stanley Hall, F.R.I.B.A., assessor. Conditions from Clerk, Spa-road, S.E.16. Dep. £2	Oct. 3	Feb. 1, 1931
Mr. E. Goff Clark, Town Preliminary Design for Proposed Exhibition Stand, for Venesta, Ltd. Premium £100 and four prizes of £10. Jury of assessors. Conditions from Editor, *The Builder*	Nov. 21 Oct. 31	Feb. 9
Council School for 300 children at Swan-street, Netherton, for Dudley L.E.C. Mr. H. T. Buckland, F.R.I.B.A., assessor. Conditions from Mr. J. Whaley, Education Offices, St. James's-road, Dudley. Dep. £1	Dec. 26	Feb. 12
Municipal Bank, Broad-street, Birmingham, for Committee of Management. Premiums, £400, £300 and £150. Sir Reginald Blomfield, R.A., assessor. Conditions from Mr. H. H. Humphries, M.Inst.C.E., City Engineer and Surveyor, Birmingham. Dep. £3 3s.	Jan. 9	Feb. 28
Proposed Isolation Hospital, Pinley, for Coventry T.C. Premiums £300, £200, £100. Mr. E. Stanley Hall, F.R.I.B.A., assessor. Conditions from the Town Clerk, Coventry. Dep. £1 1s.	Jan. 16	April 13
Design for Rye Harbour Lifeboat Disaster Memorial. Open to sculptors. Conditions from Secretary, R.S.B.S., 6, Queen's-square, W.C.1	Jan. 2	April 30
	Dec. 26	

New Flats, Wembley Park.

Some new flats, known as "Raglan Court," Wembley Park, have been specially planned to provide accommodation for professional and business people and also women workers at rentals ranging from £80 to £125. These figures include rates and taxes, cleaning and lighting of staircases, and also maintenance of gardens. The building consists of a series of self-contained three-story units, splayed at various angles, and the result of this arrangement is that all rooms get the maximum of light and air. A feature of the scheme, which has been carried out by the Metropolitan Railway, is the provision of nearly three acres of gardens which have been specially laid out.

CORRESPONDENCE

Registration.

SIR,—I apologise for taking up further space in your paper, but in reply to Mr. Athoe's letter of last Friday I can only say that I am still awaiting information from him regarding those "reckless statements" which he complained of in his letter to you published in *The Builder* on December 19 last. I ask him to clear up this matter first before attempting to "enlighten" me on a subject which I have carefully followed for years, even before the Association he represents was either formed or thought of, and therefore statements accusing me of being "ignorant of the provisions of the Bill" are so much in opposition to the facts that any repetition of these statements will cause serious attention on my part.

L. A. F. IRELAND.

SIR,—I am delighted to see the remarks by "Positive," as they help the opposition considerably. He makes a great point of the long struggle and the years of work by members of the R.I.B.A. who favoured Registration, and he writes: "I . . . might almost venture to leave my defence to stand on this point alone." He refers to the defeat of the Bill as the "defeat of a great profession in a campaign extending over a great number of years." He refers to Registration as a "goal for the architectural profession," that the defeat would destroy "the fruits of the energies of the most active men of his and a preceding generation." I have no hesitation in stating that I consider his statements are misleading and inaccurate. I worked for Registration for years, it was a grand principle, entirely different from the proposals in the present Bill; every old ideal has disappeared and nothing remains but the shell. the name "Registration." The present principle of the Bill is as different from the old idea of Registration as a jerry-built bungalow is from Westminster Abbey, and yet each may be called "a building," and each scheme "Registration."

"Positive" actually advocates that auctioneers, house agents, borough engineers and others who "have practised architecture according to their lights" should be enrolled with the distinction of Registered Architects by the Royal Institute of British Architects, and also that "No defender of the Bill who is in his senses will claim that it brings us straight out of Bedlam into Utopia." I do not claim that the present state of affairs is Utopian, far from it, but the idea of the R.I.B.A. classing a man who has never passed an examination in architecture as a Registered Architect certainly suggests Bedlam.

If the public wish to consult a Register or List of Architects, they can refer to the R.I.B.A. Kalendar; that register indicates the architects who are qualified by examination and those who have no qualification, but I can quite understand that unqualified men would like a very different type of Register.

I do hope we may hear more from "Positive," for his letters will be so useful to Members of Parliament and others who oppose it.

ALSO NEGATIVE.

"Beauty and Ugliness."

SIR,—Beauty in building, like any other kind of beauty, is surely not dependent upon the bulk or value of the materials used. A beautiful song or poem may be scribbled on waste paper with a stub of pencil, or a lovely statuette modelled from twopennyworth of clay. And, equally, a comely cottage may be built of simple, cheap materials, as were nine-tenths of the old ones which we now delight in.

Mr. Davidson instances the stone cottages of Northants, which I admire as much as he; but I do not think that, as he seems to suggest, the thickness of their stone walls is the most indispensable ingredient in their beauty. I might quote the half-timbered cottages of the Southern counties as having an equal charm, although their walls are thin. Plainness and absence of trimmings no more guarantee beauty than does the presence of elaborate detail or expensive finish. We must look further than this.

I cannot believe that the resuscitation of local building traditions and simple, honest craftsmanship is unlikely or impracticable. I believe it is the one hope for rural building, and to foster and work for these ideals should be one of the most important duties of the architectural profession, as well as of all those who believe in the beauty of rural England. Nothing can take the place of tradition as a basis for sensible, sound design, but by this I do not mean the elaborate tricks of period or style, any more than in speaking of craftsmanship I mean the ability to reproduce such things. The old builders' craftsmanship wrought beauty out of the commonest and simplest materials; their *resource* was as infinite as their *resources* were limited; their training made them workmen and not machines; and their methods, once more adopted, even in these commercialised days, need be no more arduous or expensive than any other if the training and practice is right from the start.

A. EDGAR BERESFORD.

Regional or National Planning?

SIR,—Your leader on "Regional or National Planning?" comes as a cordial to those who have this question of national development at their heart strings. Eleven years' experience in the working out of Regional Planning schemes in this country has impelled me, during the last three years, to bring the necessity for national planning before the International Federation for Housing and Town Planning time and again.

You advocate the linking up of the multifarious regional planning schemes to form one national network. I am afraid that in practice this method would be found to be unworkable for obvious reasons. Neither do I consider county units suitable for the purpose. When we think of national development we must do so with an economic mind. Each nation is a combine of provinces, and the economics of Yorkshire and Middlesex may be as divergent as those of Catalonia and Castile.

For these reasons I uphold the principle of national planning in super-regional units—somewhat upon the lines of the electrification system now in course of development. In what other way can we ever hope to co-ordinate the requirements of the diverse authorities—each anxious to assist in our national development from its own standpoint—with the economic and physical potentialities which constitute planning units of provincial extent?

If the provincial character of the problem had been recognised at the outset I have no doubt the existing regional planning schemes would have been drafted from the national rather than from the local point of view, and would have consequently fitted in better with the constructive proposals of the divisional engineers of the Transport Ministry.

JOHN MACNICOL.

Birmingham.

"The Estimator's Difficulties."

SIR,—In your issue of January 16, Mr. J. R. Taylor raised the question of the efficacy of bills of quantities from the builder's viewpoint, and suggested, among other things, that as many bills were now produced there was much overlapping of clerical work. He further stated that "the true purpose of quantities is to provide the estimator with the clearest possible information as to the real intent and meaning of the plans prepared."

I would go a step further and suggest that quantities should be so framed as to enable the estimator to price them and the successful contractor to order his material by them, with the minimum of additional calculation.

Thus, in an item of intersection, hip tiles, the number of tiles might be stated in addition to, or instead of, the length of the hip. The difficulty of pricing such speculative items as the cost of carriage on p.c items might be overcome by including this cost in the p.c. sum, and adjusting any variation at the end of the job.

It seems to me that there is a strong case for the standardisation and revision of our methods of quantity surveying, and, incidentally, for the scrapping of the more academic text-books on the subject. It is surely anachronistic, in our small island, for the methods of measurement to differ in various parts of the country.

J. W. DAVIES.

Credit and Deferred Payment.

SIR,—Credit of the sort discussed in your leading article of the 16th inst. is more accurately described as a deferred payment. A builder in allowing a debtor to put off settling his account is only agreeing to wait for payment to him of money which is already in existence somewhere; he is not creating any money at all. Bank credit is of an entirely different nature, for "every bank loan creates a deposit," and banks alone "have this power of creating money." "One ounce of standard gold in the Bank of England, worth 77s. 9d., provided about £80 of bank credit" (Mr. A. M. Samuel on the Gold Standard, *The Times*, January 16).

There is a world of difference between credit and deferred payment, and it is of the utmost importance to industry to distinguish between the two. If a bank has £50 cash it can lend £1,000. If Messrs. Putlog and Co., builders, have £50 cash they can lend £50 and no more.

ARTHUR WELFORD.

BURTON-UPON-TRENT COUNCIL SCHOOLS COMPETITION

176 designs were submitted in this competition, the first and second designs in which we illustrate in this issue. The position of the buildings on the site, in the case of the winning design, by Messrs. Home and Knight, FF.R.I.B.A., has been largely determined by the fact that the greater part of the town from which the scholars will be drawn lies to the south-east and east. The main entrance has, therefore, been planned facing Clarence-street, but the buildings are nevertheless well set back. The scholars' entrances have been planned at either end of the buildings, ensuring easy access from either the north or the south of the site.

The possibility of planning the two schools as two separate buildings has been discarded on the grounds of economy. Of the three remaining alternative schemes :—

(1.) All the classrooms on the ground floor, with the special subjects on an upper floor.

(2.) The vertical division—both boys and girls occupying two floors.

(3.) A separate floor being allocated to each sex—the horizontal division—the last method of planning is the one that has been adopted. It is claimed that this scheme ensures easy administration (each school being self-contained on its own floor).

Entrances have been designed for the scholars, with cloakrooms and lavatories planned to avoid cross traffic, with the cycle sheds immediately adjacent to the entrances, and the whole sanitary block available from the playgrounds. The staff and public entrance is placed centrally on the south-east front, the staff rooms being placed in close proximity on both floors. Careful consideration has been given to the possibility of letting the assembly halls for various public or other functions, and ample crush space and staircases have been provided to enable either or both halls to be let. The room for the Head of the evening school has been planned on the ground floor, as being readily available for interviews. Owing to the proximity of the girls' school, separate lavatory accommodation has, in this instance, been provided.

Presentation of London Architecture Medal and Prizes and Studentships.

At a meeting of the R.I.B.A. held at 9, Conduit-street, W., on Monday evening last, Sir Banister Fletcher, P.R.I.B.A., who occupied the chair, presented the R.I.B.A. Medal and Diploma for a London Building completed between 1927 and 1929 to Messrs. Adams, Holden and Pearson, FF.R.I.B.A., for their Underground Electric Railway Company's premises, Broadway, Westminster. He also presented the annual Prizes and Studentships to the successful competitors.

Before making the presentation to Messrs. Adams, Holden and Pearson, the President said, to their great sorrow the senior member of that famous partnership had been taken from them. They all mourned his loss and deplored his absence that night. But they had with them his partners, Mr. Lionel Pearson and Mr. Charles Holden, who were responsible, with Mr. Adams, for the design of that very striking building. He saw it described by a critic the other day as the best building of the last ten years. However that might be, it was agreed by everyone that the award was an admirable one.

The building had a remarkably original plan in the form of a cross, upon which an imposing superstructure had been raised, devoid of any useless architectural ornament, and grouping together in a most satisfactory way in a striking pyramidal form. He thought the architects had been very successful by their skill in massing upon this cruciform plan, producing a structure which had pleasing proportions, crowned by its central tower. He was sure the directors of the great organisation which was so nobly housed in that building were as proud of it as they were proud of the architects who designed it.

The President then presented the Medal and Diploma.

Mr. Charles Holden, in acknowledging the presentation, said it was their great regret that their late partner was no longer with them to participate in that event in the firm's history. His (the speaker's) own association with him went back over thirty very full and very stimulating years. When they began to work on the plans for the Underground office building they found it difficult to get up any enthusiasm for the site, which was very shapeless and irregular. Plan after plan was tried and discarded for its dullness, without even attempting to set it up in elevation. It was, he thought, a fellow-feeling for the office-worker in Victoria-street that finally suggested the "short cut" across the site to St. James's Park Station, and, at the risk of having the scheme turned down for making a thoroughfare of the building, it was decided to explore the possibilities of the "short cut" plan.

With the "short cut" as the transverse axis, the longitudinal axis followed with no great effort of imagination. He remembered the thrill of those two crossed lines on the paper and all that they implied: order out of chaos, a building with few corridors, perfect light and air to the offices, and a plan that could be almost said to design itself externally. The most difficult point in the cross plan was the dark centre at the crossing, but the central hall, lifts, lavatories and staircase all fell into their places very happily, with ample direct light and natural ventilation. He would like them to see the central hall on the ground floor on a sunny day. From that time on, the building seemed to have a charmed existence, thanks to the confidence and encouragement of Lord Ashfield and Mr. Pick. He hoped—he was bold enough to think—that their confidence was justified; certainly if they had failed at any point the responsibility for failure was the architects' entirely. Mr. Pick, with his weekly committee of experts, was a tower of strength at all times, sweeping aside obstacles, sitting on their head when they were inclined to flamboyance, but more often giving them their head. It had been a great adventure from beginning to end, with a delightful sense of teamwork everywhere.

If he might be permitted to touch on the subject of sculpture, he would like to say that he willingly accepted responsibility generally for the sculptures (with due acknowledgments, of course, to the sculptors themselves). The weather, and a short memory for headlines in the Press, was already bringing the sculptures into their right relation to the building, and he did not think they needed any apology.

Architecture was the one historian whose veracity was unfailing at all times and in all periods of history; it told all their weaknesses and their indifferences as well as their aspirations. They could hide nothing when they exercised their profession; it was their Father Confessor, whether they willed it or not. But, just as it was such an infallible witness against them, so it was capable even more of being the medium by which their innermost thoughts and aspirations were published to those who had eyes to see and minds to respond. He had visions of an architecture as pure and true to its purpose as a Bach figure; an architecture telling of joy in plan, structure and material; joy, too, in all the human and even the mechanical activities which made up architecture to-day—and without the use of adventitious aids to emotion. He believed *that* was the thought underlying the best of what was called "modernism" to-day. It must be remembered that it was the modernist of the past who was the maker of the traditions that some would have us follow exclusively to-day. We, too, had our part to play in the making of traditions; but let us see to it that these grew naturally out of the adjustment of our ideas to changing conditions of life and changing methods of construction—only so should we keep our architecture sane and free from the element of ephemeral fashion.

He thanked the President on behalf of his partners and himself for the Medal and Diploma and for his kind expressions of appreciation of their work.

Mr. Lionel Pearson also returned thanks, paying tribute to his "two very remarkable partners," and giving an account of the genesis of the idea of the cruciform plan. He well remembered, he said, Mr. Adams taking the drawings along and saying he wondered whether Mr. Pick was going to "rise to it"—as, of course, he did.

Mr. Frank Pick, managing director of the Underground Railway, said that much had been said about their building—not so much about the merits of the architecture as about the more questionable merits of the sculpture. The building was a wholesome, a light and an airy one in which to live. It was a plain expression of structure, and there was no attempt to ornament or disguise the building, which rose sheer up and went so high that it had a ninth floor, which the L.C.C. would not allow them to use. The architects insisted on a ninth floor because the proportions needed it, and there was a tower above. He thanked the architects for the excellent building they had provided. In his view, for use or ornament, it could not be improved upon, and he hoped that it would serve as a landmark and as an indication to students of the sort of building that London ought to have.

The President then presented the Prizes and Studentships, and the meeting terminated.

"THE BUILDER" DEBATE

XXXV.—REGISTRATION.

Sir,—"Positive" has been at such great pains to erect a card castle of his imagination that one almost hesitates to breathe upon it. However, as that is what we are here for, it must be done, be the effort ever so slight. He describes in detail the two stools upon which the powers at Conduit-street have attempted to sit, without succeeding in finding their joint centre of gravity, and in so doing he exposes the whole weakness of his case. Registration is purely an internal matter to the profession. Failure to be honest about this aspect of the movement has meant its wrecking. It should have been obvious from the start that unless the architectural profession found real protection in the measure which will presumably shortly pass the House of Commons into law, the measure was not worth proceeding with.

Instead of facing this hard fact, and admitting defeat, at any rate for the moment, the promoters of the Bill have made one surrender after another, until the emasculated product which remains is no more than an empty form of time-wasting verbosity. The idea of Registration was a good one. The idea of reserving the title of "Architect" to the qualified ranks of the profession was a good one, and more nearly possible of achievement than any attempt to close the legal practice of architecture to all but the qualified. It was, perhaps, admissible to forgo either of these and reserve the register to the qualified. But when this last remnant of sense is taken from the Bill, I ask "Positive" seriously to tell us what there is left to justify his statement of motion: "That the . . . Bill . . . will be a great benefit to the profession"; unless he has mentally reserved a qualification: "To the estate agency profession."

"Positive" seems to treasure the "successful end of more than a generation of sustained effort." Corporate effort is an admirable thing in a worthy cause, but if the cause becomes trivial, the immense effort of the elect reminds one of a team of specially trained London policemen heaving on a rope which is unattached at the other end. The movement may be striking and immediate, but it is not likely to be registered on the scroll of sporting fame. That is exactly the type of success which the R.I.B.A. has achieved in this purely nominal victory.

On all hands one meets nothing but apathy among the rank and file, both among convinced registrationists and equally convinced "anti-s." This can only mean one thing: that by the skilful chemistry of the cooks the salt has completely lost its savour. We have heard that the opposition to the Bill has greatly weakened in the last few months. I do not wonder at it, for why should one waste ammunition on an army that has already disarmed itself?

I cannot even congratulate "Positive" upon having succeeded in what he aimed at; for this Bill is not, whatever he may say, the ghost of what he originally aimed at. The Act, when it arrives—as presumably it will within the next few months—will be still-born, and the event a matter of condolence rather than congratulation. I should like to know in what way any single practitioner of architecture of the present day will benefit when this empty Bill becomes law. A.B.C.

THE ARCHITECTURE OF THE THEATRE IN AMERICA.—III

By E. WAMSLEY-LEWIS, A.R.I.B.A.

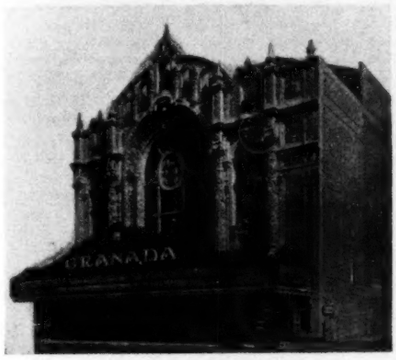
LOCATION AND STYLE.

The two slogans of the American theatre promoter are :—

1. Right location is paramount to success
2. Decorate for mass appeal.

The Site.

In America the small cinema theatre whether it be in the city or the sole place of entertainment in a small country town, is doomed. The motor-car is so cheap, and the roads are so good, that the vast majority of patrons go to the big cinema in the nearest big town for their entertainment



Granada Theatre.

Frivolous elevation in terra-cotta and style popular for cinematograph theatres.

rather than put up with the inferior productions obtainable nearer their own homes. New, larger, and more elaborate theatres are continually replacing the old houses on an unprecedented scale, and when the large and elaborate house opens its doors, the smaller and older cinema theatres become automatically relegated to the shooting-gallery class. The large theatre is in itself an attraction, for the majority of people like to follow the crowd.

In New York there seems to be one factor that theatre promoters believe assures success—that is, to have a site for a theatre on Broadway. If their site is not there, they feel compelled to make a tremendous noise, or do something on a superlative scale, to attract the people away from Broadway towards their doors. This, of course, only holds good actually for the variety and cinema business.

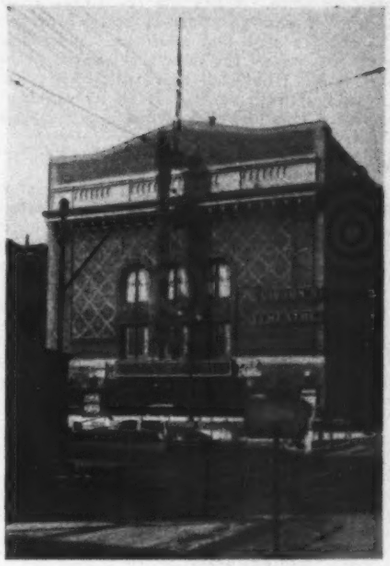
A few years ago a rental of $30 a year per seat was considered high for a picture or variety theatre with seating accommodation for 1,500 people. To-day, a large city theatre with seating for 6,000 at a rental as high as $80 can be made to pay with profit.

Decoration of the Interior.

The commercial managers of American theatres have been in the habit of demanding of the architects an ever-increasing magnificence. If the building appears to have cost a lot of money, the patron will feel that the cost of his ticket has not been wholly thrown away should the performance itself displease him. Thus the management wins half the battle. Merely because the decorations are florid and extravagant, it is not enough to condemn them. They may still be done by persons with knowledge and good taste. The ornate detail may be clever, involved, original, fantastic and big, any one or all of these, but if it is suitable and in good scale with its surroundings it cannot be condemned. If the desire is for richness and grandeur, provided there are sufficient financial resources to accomplish the task in good and proper materials, fine architecture may yet result.

In England to-day we confuse richness of effect with vulgarity, and decry exuberant decoration, however suitable it may be. Because we desire simplicity in the home, surely we are unreasonable to demand it in the theatre auditorium, too. The main thing is to give the members of the audience a surrounding different from that they get at home. Surely the gilded palace must be a great attraction for those who live in a poor cottage. This is the axiom of Mr. E. F. Albee, the managing director of one of the biggest chains of vaudeville theatres in the United States. He is well over 70 years of age, and has devoted the whole of his life to the theatre, to the lives of those who work in it, and to the patrons who come to it. He does not favour ostentation, but demands richness, cheerfulness and comfort, and surroundings superior to those found in the average home. He never allows his architects to depart from the time-honoured styles, usually of the French Renaissance, preferring to be sure of the result to be achieved. His colour schemes he chooses to a nicety, actually mounting the scaffolding whilst the painters are at work to be sure that the tone is as he desires it. His favoured colour schemes are the usual ivory and gold, with crimson carpets, chair coverings and draperies, because he believes that the average man likes these best, expecting and being most used to them. His theatres always look clean and cheerful. Mr. Albee's pet house is his theatre at Brooklyn. He has filled the grand foyer with furniture, carpets and pictures of his own to the value of £50,000, so that the patrons can enjoy them, and in this way he carries out his uplift campaign.

Since 1893, when he built the Keith Theatre, in Boston, Mr. Albee has been a firm believer in the large and magnificent house. He was the pioneer in America of this kind of building, and he is still greatly interested in giving the public finely-equipped theatres. He took charge of the Boston Theatre, under instructions to spend $125,000 in the operation. In those days carpenters worked for $2.50 a day, and other operatives were paid about the same rate, so much could be done with $125,000.

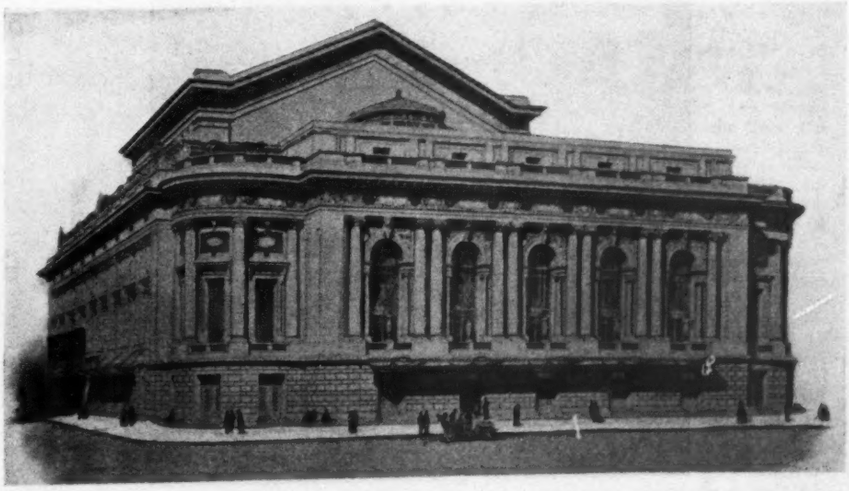


Gibson's Theatre, Philadelphia.

Severe elevation typical of some legitimate theatres.

The amount, however, was not sufficient to do all that Mr. Albee had planned, and on his own responsibility he elaborated on the original plans. He engaged a noted mural artist to decorate the auditorium, and purchased furnishings of a kind never before used in equipping a theatre. Albee made up his mind that he would get into that theatre people who never before had regarded "variety" as worthy of their presence or interest. Those who know Boston and remember the attitude of the better classes of that date towards the music-hall will realise how much this meant. When completed, the job cost $600,000, and the Keith Theatre became the talk of the country. Art critics wrote articles about the decorations on walls and ceilings, decorators commented upon the magnificence of the scheme, and variety was revolutionised and started on its way to a steady improvement.

Mr. Albee is still building vaudeville theatres, and still finds that the same general conditions prevail. The magnificent house opens to a most enthusiastic and curious public. Big gross receipts are marked up for months—the attractions of the house itself are still drawing people



New Century Theatre, New York.

Messrs. Carrère & Hastings, Architects.

past its office. When all the sights have been seen and the normal state prevails, the theatre will find itself in competition with others, and the show becomes the principal factor; but still there will be a great advantage in presenting it in a beautiful, comfortable, and well-designed and equipped theatre.

The Elevation.

Civic pride seems to be a far greater force in America than here. A very large proportion of citizens will know which of their buildings gained the medal for being the best of the year, and they nearly always know the name of the architect. A waitress in a restaurant high up in New York, having discovered that I was interested in buildings, pointed out across the roofs to the gold medal building with such joy, and told me how much she liked it. She also could name the architects of most of the important buildings within view.

In spite of the public interest in their work, however, the American architect has fettered himself to a tradition culled from Europe, but far stronger than is found in any European country to-day. He has been afraid of creating a new style entirely of his own invention, in spite of the marvellous opportunities which have been his. Usually an American building is clothed with features copied directly from one or another of the European styles most favoured at the moment; Robert Adam or Spanish Baroque is employed like a fashion which fades and reappears again. Details generally are more refined and better chosen than is found in similar instances in English contemporary work, but they are more directly copied from the originals. New buildings in Oxford-street and Regent-street show a considerably lower standard of taste than is to be found in Fifth Avenue. Two architects in America have, however, done splendidly original and fine pioneer work, unshackled by these foreign influences of design. They are Louis Sullivan and Frank Lloyd Wright. Mr. Wright designed, amongst other buildings, the Midway Gardens in Chicago, and architects are awaiting with interest the theatre which he is to build at Olive Hill, Los Angeles.

In the last few years the Zoning Laws have been responsible for the beautiful and impressive massing of the huge skyscrapers, ever getting smaller in plan as they ascend, and ending in towers quite different from what had been seen before. Impressions of these are got in the inspiring drawings of Hugh Ferris, showing schemes for massing these colossal buildings. These are becoming the important additions to a new architecture which America has found for herself, and, as they are gradually shedding European detail too, for they are ceasing to be skinned in Gothic, Romanesque or Renaissance, they become finer and more purely American. These buildings, although thoroughly commercial propositions, are as beautiful and dramatic as any building ever seen throughout the history of the world.

Expression.

It is claimed that a building should express its purpose in its design. If that be so, there will be a great variety of expressions demanded from the different types of theatrical performances, from the opera to the music-hall and cinema. It is surprising to find how often the elevations of American theatres will correctly indicate what kind of show is performed within. Sometimes, however, a large expanse of brickwork and just a long row of low doors under a canopy, with a few signs above, will represent a theatre, but not an atom of joy will be noticed in its forbidding front. A theatre, being intended for a place of pleasurable entertainment, should be gay, and may be romantic, dramatic, or frivolous, blossoming into exuberant ornament with impunity. It may even be vulgar if this means merely catering for popular appeal, and yet be in good taste, well designed and expressive.

Remembering that the slogan, "Decorate for mass appeal," applies to exterior as well as interior, many theatrical managements in America demand that their buildings be smothered in ornament, the commercial idea being that much gilding and ostentation is a sop to the public. When in the receptive frame of mind necessary to witness a play, one is subject to the slightest influences. The façade of a theatre can very well suggest the type of play to be expected within: buildings appear earmarked with their own particular history.

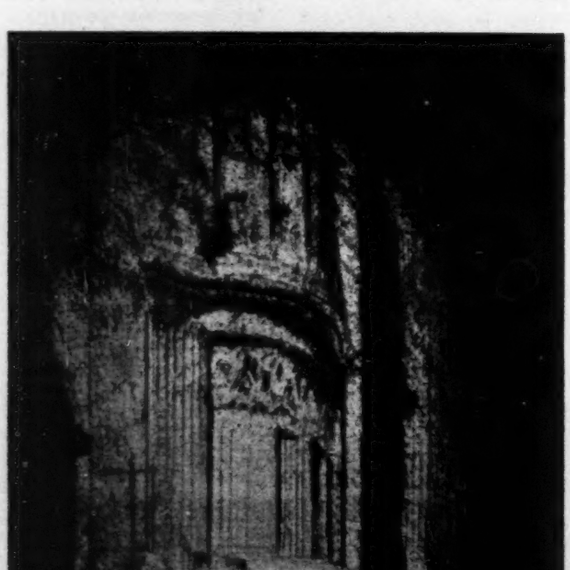
Legitimate Theatres.

The elevations of American theatres usually express themselves very well indeed. Where can more charmingly expressed façades for the intimate playhouse be found than those of Mr. C. Howard Crane, the Selwyn and Harris Theatres in Chicago, and the Music Box Theatre, New York? The Chicago theatres were inspired by Le Petit Trianon, of Versailles, which reminds us of the lady for whom it was built, so these theatres suggest the drawing-room comedy. How well the Arts Theatre movement finds expression in the Guild Theatre, New York, also by Mr. Crane. Does any theatre front in the world show more dramatic feeling than Mr. Joseph Urban's Ziegfeld Theatre, New York? Mr. Urban was directed to make "a big noise" with the façade to attract people from Broadway to Sixth-avenue, on which the theatre is built. The owners felt this necessary, because there were no other theatres on Sixth Avenue, and the public would not expect to find one there. Mr. Urban obtained dramatic effect by the bigness in scale of the mouldings and ornament. He conceived his design to be carried out in black and white marble, but the bankers did not want to kill the neighbourhood, so plain white limestone was used. The band of ornament within the false proscenium seems to symbolise the spirit of the dancing chorus most successfully, although no figure is actually represented in it. The whole design is vigorous, and the front is intended to suggest a proscenium.

In the grand manner of architecture, the New Century Theatre, New York, by Carrère and Hastings, ranks very highly. It was originally designed as a house for opera, and its academic, well-proportioned and distinguished exterior denotes its purpose very clearly. The oldest theatre in America, the Walnut, in Philadelphia, is very beautiful and looks its part surprisingly well. It has a tradition similar to that of Drury Lane, in London, but has been more fortunate in that it has existed without fire or other cause of destruction since 1809, although the interior has been entirely changed from time to time. Uninterrupted successions of performances have been given since the day it was opened, although the entertainment has varied from negro minstrels to grand opera, from burlesque to tragedy, and from Punch and Judy to the circus. It was in this theatre that Edwin Forrest made his first appearance on a regular stage, and in 1821 Edmund Kean, the English tragedian, drew such crowds that during the sixteen nights when he appeared the receipts for the theatre ran as high as $1,397 per night, a very profitable house for that period.

In some of the smaller towns of America there are also some most admirably designed theatre façades. The Rye Theatre, Rye, New York State, by Harry L. Walker, is designed in the Colonial manner in red brick with white dressings. Its portico is particularly well proportioned. The Bellevue Theatre, Upper Montclair, New Jersey, by J. H. Phillips, is a surprisingly good example in the English half-timbered style, and was the only worthy example of this style in any kind of building that I saw in the United States. Le Petit Theatre du Vieux Carre, at New Orleans, by Armstrong and Koch, has a provincial French feeling, is quite simple but very charming, and very fitting in its Southern surroundings.

In cultured circles at the present time ornament is eschewed, but few of our commercial theatres have yet achieved the acclaimed simplicity. Whilst in this country we throw a few odd pieces of ornament on our theatres, and run countless strange mouldings all over them, in America there is usually some coherence in the design, even though it is worked in some honoured style of which we are heartily tired. However, the employment of the trained designer is almost invariably felt.



The Ziegfeld Theatre, New York.
MR. JOSEPH URBAN, Architect.

THE QUILLER LETTERS

THE OUTLINE OF AN ARCHITECTURAL EDUCATION.

Annotated by M. A.

[The names used in the Quiller Letters are all fictitious, and do not refer to any living person.]

III.—FOOTINGS.

R. B. Watcher, to Mrs. Quiller, dated October 7, 1905, from "Gables":—

My Dear Mrs. Quiller,—I am very glad to hear that Rex is enrolled at Prince's and satisfactorily settled in comfortable diggings. I can only hope that this is the start of a very successful and happy career for him, and that you will never live to feel that your husband's old friend advised you ill.

There is one little "administrative" detail you will not mind my questioning. I rather gathered that you are paying the rent of his rooms, and other expenses, and allowing him pocket-money. My strong advice would be to make him an allowance, and let him pay his way entirely as he goes. Give him a couple of pounds a week, and leave him generally to make his own arrangements, score his own successes, and—experience his failures. It will make him independent; give him an earnest of your confidence in him; and generally a taste of the way life is going to use him. He should be able to keep pace with the more moderate of his companions, and permit himself an ordinary standard of comfort and small indulgence. I would not suggest this in the case of a boy of unstable temperament, but Rex is distinctly the reverse, and I feel sure he will justify our confidence.

I would not like to say that the week will not arrive when he has not mortgaged his resources until the following Saturday. The little scheming and contriving he will have to face in such circumstances, including, possibly, a visit to a benevolent relative shared by the world; but we have all passed through something of that experience and are none the worse for it.

Rex knows he can regard "Gables" as an open house when he is in Town, and I hope you also will not hesitate to use it as a centre, as well as a reference bureau!

With very kind regards,
Yours sincerely,
R. B. Watcher.

The following from Warren Strathsay, on noteheading of "Prince's College Architectural Society," is our first introduction to a handwriting which, by its broad sense of pattern, and scorn of niggling legibility, denotes an artist of some strength of character. It is addressed to my friend at "Gables," and dated October 10, 1905:—

My Dear R. B.,—Your protégé has arrived and has made a promising start. I am obliged to you for having added one more to my brood, which remains, as usual, a small one. I often wonder how much longer the authorities in their wisdom will continue to run and staff an Architectural Division of the Arts Faculty, complete with studio and lecture theatre, second to none in this or any other college, for the benefit of ten or a dozen students year by year? In my more depressed moments, I wonder whether we have just been forgotten, and whether in common honesty I should not call "Cuckoo," and give them the chance of finding me as they pass.

Frankly, and in cold blood, it is a tiny and insignificant part I am playing in the scheme of architectural education. I have been more than pleased with some of the lads I have turned out; but for every one I have discharged for good or evil, Rowanshaw and his like are loosing their score. Is it worth the effort?

The alternative is, of course, amalgamation with Federal, which I suppose is ultimately inevitable; and I try not to let my natural disinclination to hand over the paddle of my own little canoe to influence me unduly. And, apart from that purely personal aspect of the case, I must confess that I dread the new order, and suspect a great deal of what it will stand for. So soon as the schools profess more than a kindergarten power (great as that is), studentship will suffer.

I would like to hear what you think about it, for you must have studied the question both with your natural interest in all good things, and in your official capacity at Conduit-street.

Yours ever,
Warren Strathsay.

My friend seems to have answered this letter more hurriedly than his usual deliberate replies, for the following is dated the 11th, and must have been sent immediately on the receipt of the former. The fact suggests another instance of his warm-hearted nature, hastening, in this case, to counteract a phase of depression which appears to have descended upon his friend Strathsay:—

My Dear Warren,—You have either a liver, or have taken too little advantage of the Long Vac., or both; for you seem to have quite lost your sense of proportion. You are the captain of a ship. It is no business of yours whether or not the boat is to be laid up in a few years; you have to navigate it to port, and to treat each voyage you make as a distinct adventure. The half-cargo you carry is of value both to owners and to many others, and you must add it to the many other valuable consignments you have brought into port.

You can take it from me that you are not the only person who has noticed that yours is a small department numerically; or that its equipment is relatively lavish; or that it does not pay its way, commercially speaking. But you must remember that education is about the only thing in this life, where money counts, which never can bring a commercial return. The school does not exist where the scholars pay sufficient fees to justify skilled tuition and modern equipment. The return we get from these commercial losses is good citizenship, which cannot be measured or priced.

Your little school is paying its way on those standards, for I can name a score of young men who have left you to become assets to the architectural profession of the greatest value. I do not think you have yet turned out a great prize-winner, or one whose name has become a household word. The type you have produced stand for sound principles, and they will continue in the front ranks when many of the "wonder lads" have sunk back into obscurity. Get on with your job, my dear fellow.

Amalgamation is, I am afraid, inevitable. I suspect it just as you do, and you exactly hit off the purpose of an architectural school in your "kindergarten" analogy. So soon as the schools get so powerful that they profess to turn out ready-made architects instead of candidates for Form I, we shall get a flood of over-confident and under-educated young men thrown on to the market. You know, of course, that Rowanshaw has ambitions towards a five- or six-year school course, with exemption from the Final at the end of it. Such an event must be distant, and I hope we shall escape it; but inordinate growth in numbers, and consequent increased numerical influence at the Institute, is bound to bring that sort of ambition into the realm of possibility. Remember me to Quiller, whom I shall be looking up shortly.

Yours ever,
R. B. W.

The following, also on "Prince's" noteheading, appears over the signature of Rex Quiller, and is dated November 4, 1905, which would be about a month after the start of term. As it is addressed to Watcher, at an address in the South of France, we can understand the reason why young Quiller has not previously been in personal touch with Watcher at Hampstead, where he has an open invitation:—

My Dear Mr. Watcher,—This is my first letter to you since I started at Prince's, and I am able to give more than first impressions. I am a little worried as to whether we (Mother and I) have chosen wisely. I do not feel that I shall ever get hold of architecture, or get to learn what is good and what is bad. My first job has been to draw out the Greek Doric Order from the Parthenon, which Mr. Strathsay tells me is the finest building in the world of all times. To me it is an uninteresting, stodgy sort of building, and reminds me of that shabby church you see in Waterloo Road, just after leaving the station. Yet some of the students here go into ecstasies about it, and, I suppose, see it in the same light as our master does.

I can only imagine that I am not the sort of person who is capable of appreciating architecture, and, if so, can I ever hope to become an architect? I doubt it. Yet I have enjoyed drawing it out, and, without being conceited, I think I have made a fairly neat job of it, and so, apparently, does Mr. Strathsay.

This is a sort of confession which I make now, before it is quite too late, and I am committed to a trade in which I may never be much use. I would appreciate your advice upon the matter; and please do not hesitate to tell me if I am a dud. If I cannot manage this job, there must be some other which I could tackle.

I like Mr. Strathsay very much, and there are a very decent lot of fellows here with me. I should be sorry to leave it all, but you will realise that mother cannot afford for me to experiment for long at a time, and I must be earning my own living in a few years' time.

With kind regards,
Yours sincerely,
Rex Quiller.

An interval of six days between the last and the following reply would be fairly accounted for by the long postal journeys to and from the South of France. Watcher writes from "Hotel Colorado," Cannes, dating his reply November 7, which would presumably reach its destination on the 10th:—

My Dear Rex,—If I thought you to be a young man who spoke before he thought, I should tell you not to be an impatient young ass! Knowing your character a little better, I am glad you have poured out your heart to me at this early stage of fresh experience, because I think I can help your mind to adjust itself.

You must look upon yourself not only as architecturally uneducated, but practically a foreigner to the architectural language. If you get that fact thoroughly into your head you will see that there is no more reason why you should fall in love immediately with the Parthenon than that you should experience immediate enjoyment from the study of Shakespeare's plays written in Spanish, though you can well imagine that, once you have mastered the Spanish language, you would be ready to enjoy good literature in that language as well as in your own.

Do not let your ecstatic young companions deceive you into thinking they are elect and you an outcast. As a matter of fact, the Parthenon is not a subject for ecstasies. It is an extraordinarily perfect example of structural truth consistently expressed in a simple theme. It appeals more to the mind than the eye, though it grows into visual satisfaction as one dwells upon it. I remember, on my first visit to Greece, sitting for two solid hours on the Acropolis, just looking at what remains of the Parthenon, and leaving my place singularly stimulated. It was because I had learned something of the language of structure that I could

appreciate the singular fitness of this composition. You will come to admire it just as firmly when you have learned what it is talking about. At present it is to you what I first thought it myself, a dull and ordinary affair.

So cheer up on that score, and do not let yourself think about a change of trade until there is better evidence for the need of it. Possibly it is easier to think cheerfully about things in this glorious sunshine than in your London fogs. If your mother could spare you for a week in the next vacation I should be delighted to entertain you down here.

Your sincere friend,
R. B. WATCHER.

Dated a few days after the last, the following indicates further correspondence, which does not appear to have been kept :—

MY DEAR MRS. QUILLER,—Rex has written a little more specifically to me. I imagine he has said nothing to you as to his doubts and fears, but that you have read between the lines that all was not well with him. You are quite right, for he seems to have passed through a purely temporary bad time. I hope what I have written him has cleared his mind of a few cobwebs. What has been wrong is merely that he imagined that so soon as he became an architectural student he would become an architectural seer, and he has been disappointed to find that one month of work leaves him the same Rex Quiller that he was before.

I think every conscientious student passes through an initial stage of that sort, and it does not alarm me in the least. It is, of course, far too early to say whether he will do big things in his profession or not, but a note I had from Strathsay a few days ago expresses great satisfaction with the start he has made so far, and he is in the right point of vantage to judge truly.

I hope you will not worry in the least over the matter, and I think it likely the next letter you have from Rex will be in far more cheerful tone.

With very kind regards,
Yours sincerely,
R. B. WATCHER.

An Appointment.

Mr. F. Winwood, Barrow-in-Furness, has been appointed to the post as architectural assistant in the office of the Borough Engineer and Surveyor's Department, Barrow-in-Furness.

ILLUSTRATIONS

PLATES.

"White Lodge," The Avenue, Radlett, Herts.

This house, built for Mr. Oscar S. Lee, stands on high ground overlooking the town below, in pleasant and well-wooded surroundings. The site, which slopes towards the south, possesses a fine old beech tree, which dominated and determined the placing of the house. The reception-rooms are planned on the south front overlooking a spacious garden, and have French casement windows leading to a terrace. The foundations are of reinforced concrete. The external 11-in. cavity walls are roughcast, which is finished to a pleasing texture, and cream-colour washed. The roofs are of rough green slates having wide eaves. White-painted wood casement windows, with green "jalousies," give a simple and dignified character to the house, and contribute largely to the successful treatment of the elevations.

The architects are Messrs. William A. Pite, Son and Fairweather, and the builders W. J. Wiggs and Co., Radlett. Slated roofs were supplied by Roberts, Adlard and Co.; domestic hot-water and heating by Young, Austen and Young; oak wood block by Fisher and Snushall, and ornamental ironwork by Bainbridge Reynolds, Ltd.

County School for Boys, Beckenham and Penge.

The site on which the building has been erected, known as "St. Arvan's," covers an area of eight acres, and has a frontage of 682 feet on the main Beckenham-road in that part named High-street, Penge. The school will serve the Beckenham and Penge areas and take the place of the Technical Institute in Beckenham, which is now inadequate. The building is constructed in brickwork and faced externally with Kentish red sand-faced bricks and artificial stone. The roofs are covered with red sand-faced tiles. Fireproof construction has been adopted wherever possible. All rooms are well lighted and ventilated, and the position of the rooms and corridors has been carefully planned to ensure the efficient working of the school organisation. The building is intended to accommodate 500 pupils, and is planned around two quadrangles which are separated by the assembly hall and connected thereto by cloister ways. The following accommodation is provided :—

Centrally and South-west Wing.—Sixteen classrooms, head master's and secretary's rooms, library and assembly hall.

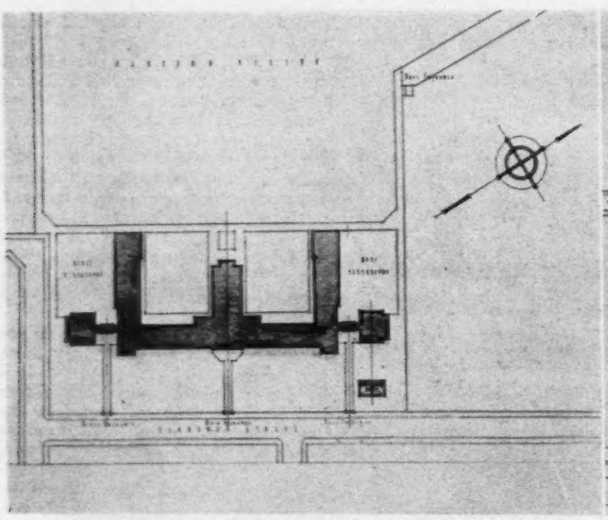
North-west Wing.—This wing houses on the ground floor and first floor the chemistry and physics and advanced chemistry and physics laboratories, with preparation and dark rooms. The corridor continues on the first floor to serve the lecture and medical inspection rooms.

South-east Wing.—The ground floor accommodates the gymnasium, which is designed with folding doors along the entire length of its south-east wall, opening out on to a paved area. The doors on the opposite wall open under a cloister way into the south-east quadrangle. There is a separate block containing woodwork and metalwork rooms, with forge and stores situated south-east of and 25 ft. from the gymnasium. The first floor of this wing is occupied by the art and machine drawing rooms, which are divided by a folding screen which may be opened to allow the whole to be used for examination purposes. The main lighting to these rooms is by large windows facing north.

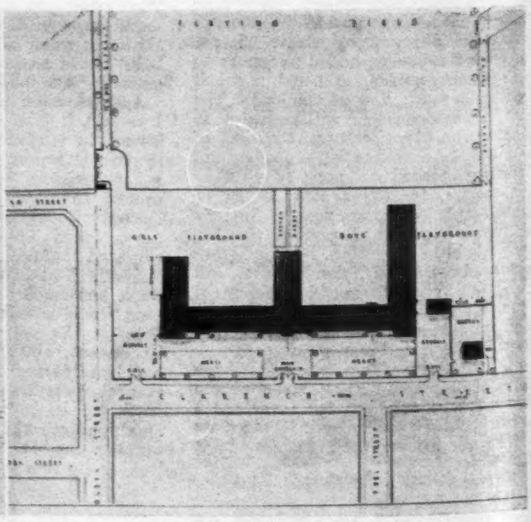
North-east Wing.—This wing accommodates the dining-hall (which serves also as a stage), served by a kitchen, under the whole of which is the green room, kitchen stores, and heating chamber. Above the kitchen on the first floor are the kitchen staff rooms. The remainder of this wing on either side accommodates on the ground floor cloakrooms, lavatories, changing rooms, with foot and shower baths, and offices. The school staff and caretaker's quarters are on the first floor in the north-east corner, and are self-contained. Sixteen stores and five staircases are provided in various parts of the school. The building is centrally heated, and fitted throughout with intercommunicating telephones, bells and fire-alarms.

The general contractors were Messrs. J. Elliman and Son, Ltd., of Beckenham, who were also responsible for the laboratory fittings, joinery and plumbing and sanitary works, and the following is a list of subcontractors :—Concrete, Ltd., reinforced concrete floors; The Victoria Stone Co., cast stone dressings; The Brunswick Metal Casement and Engineering Co., metal windows and leaded lights; T. R. Skinner and Co., roof tiling; W. Trindall, Beckenham, ironwork; W. Heselden, Sidcup, plaster, fibrous plaster decoration and granolithic pavings; Stevens and Adams, Ltd., maple flooring; F. and E. Eastman, terrazzo and tile pavings; Noelite, Ltd., Borough Green, stone pavings; London Asphalt Co., Ltd., asphalting; F. Hayden, Ltd., Tunbridge Wells, central heating;

(*Continued on page* 203).

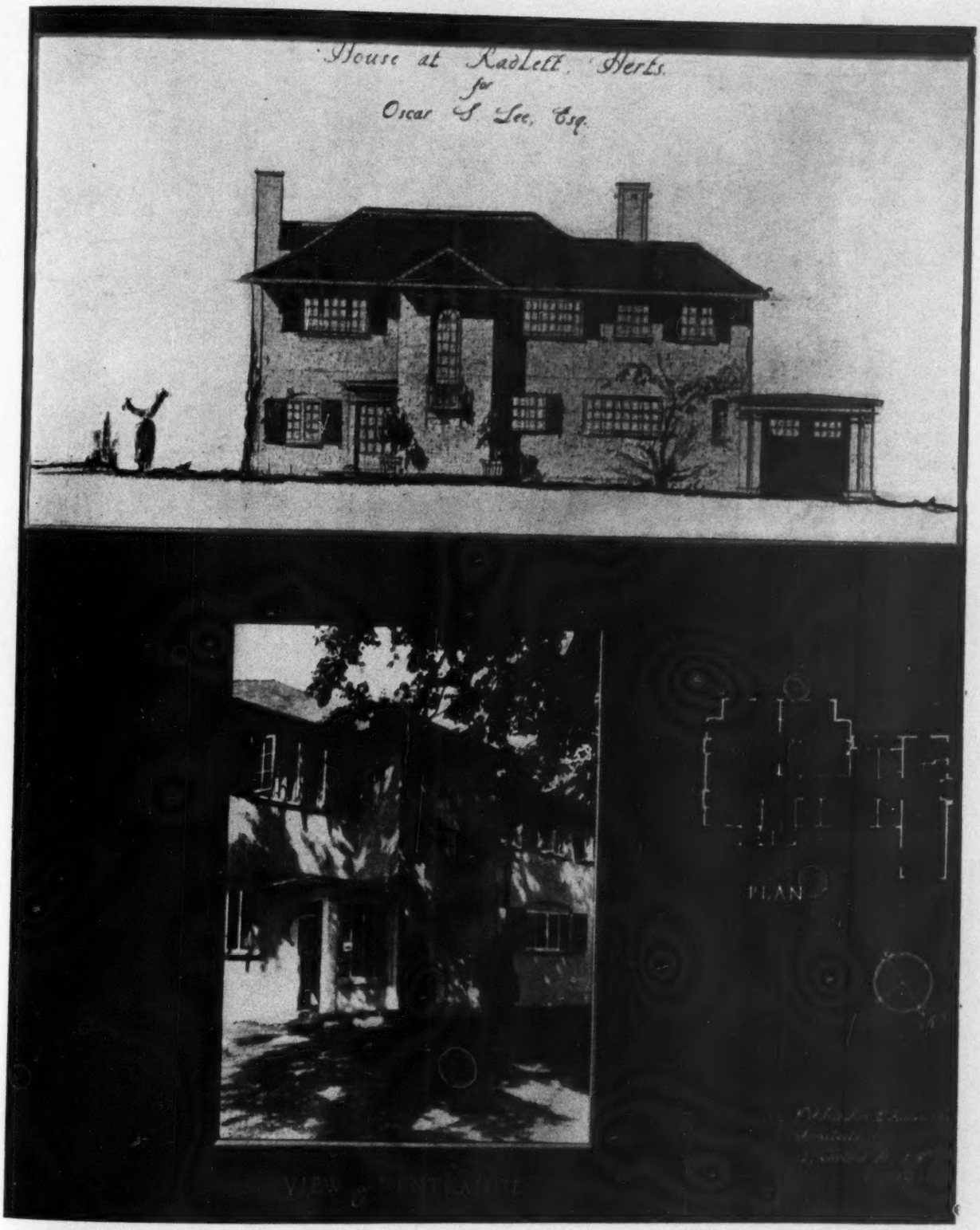


BLOCK PLAN, FIRST PREMIATED DESIGN BY MESSRS. HOME AND KNIGHT, FF.R.I.B.A., Architects.



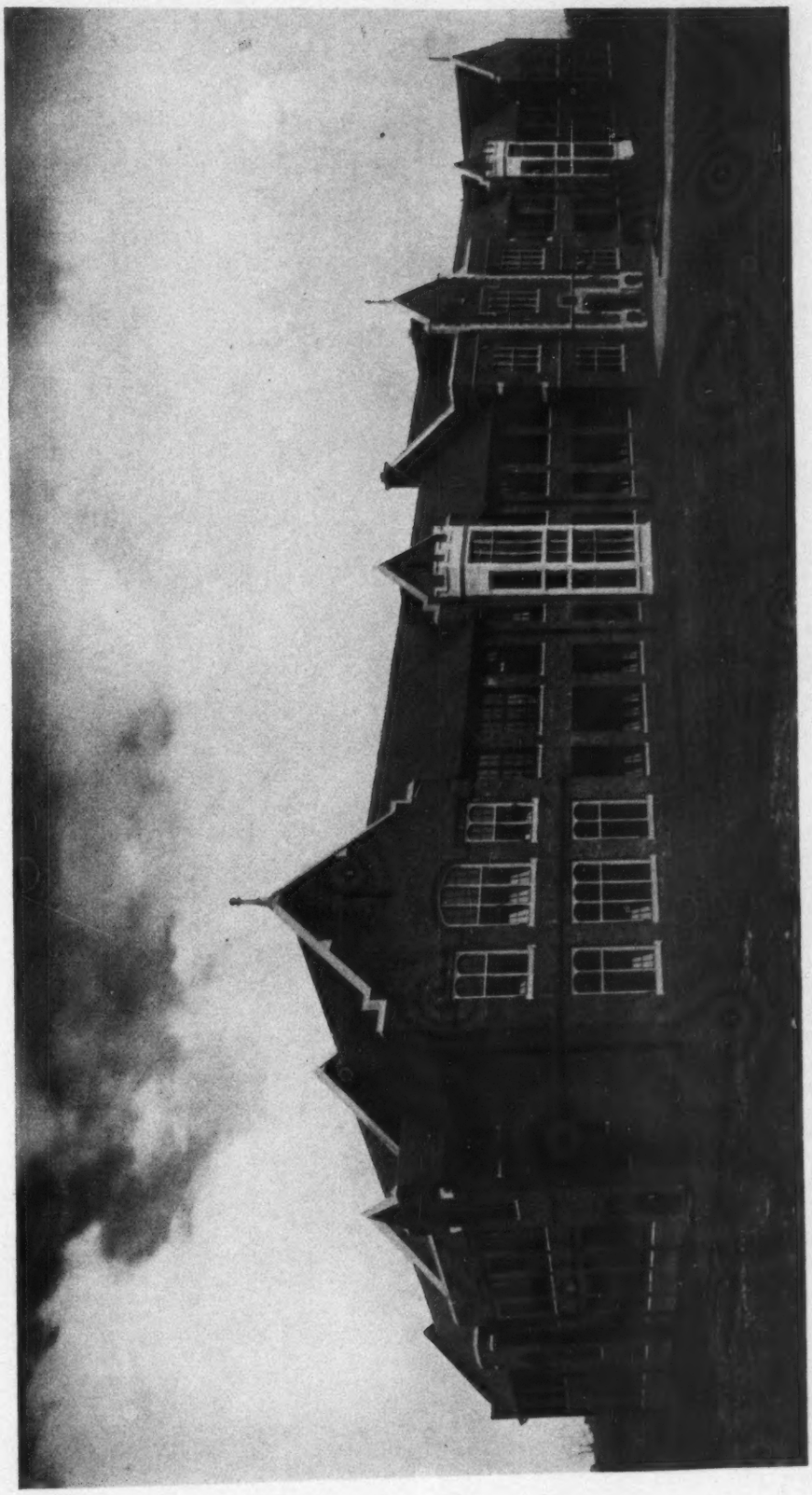
BLOCK PLAN, SECOND PREMIATED DESIGN BY MESSRS. F. S. ANTLIFF & SON.

Competition for New Senior Schools, Clarence Street, Burton-upon-Trent.



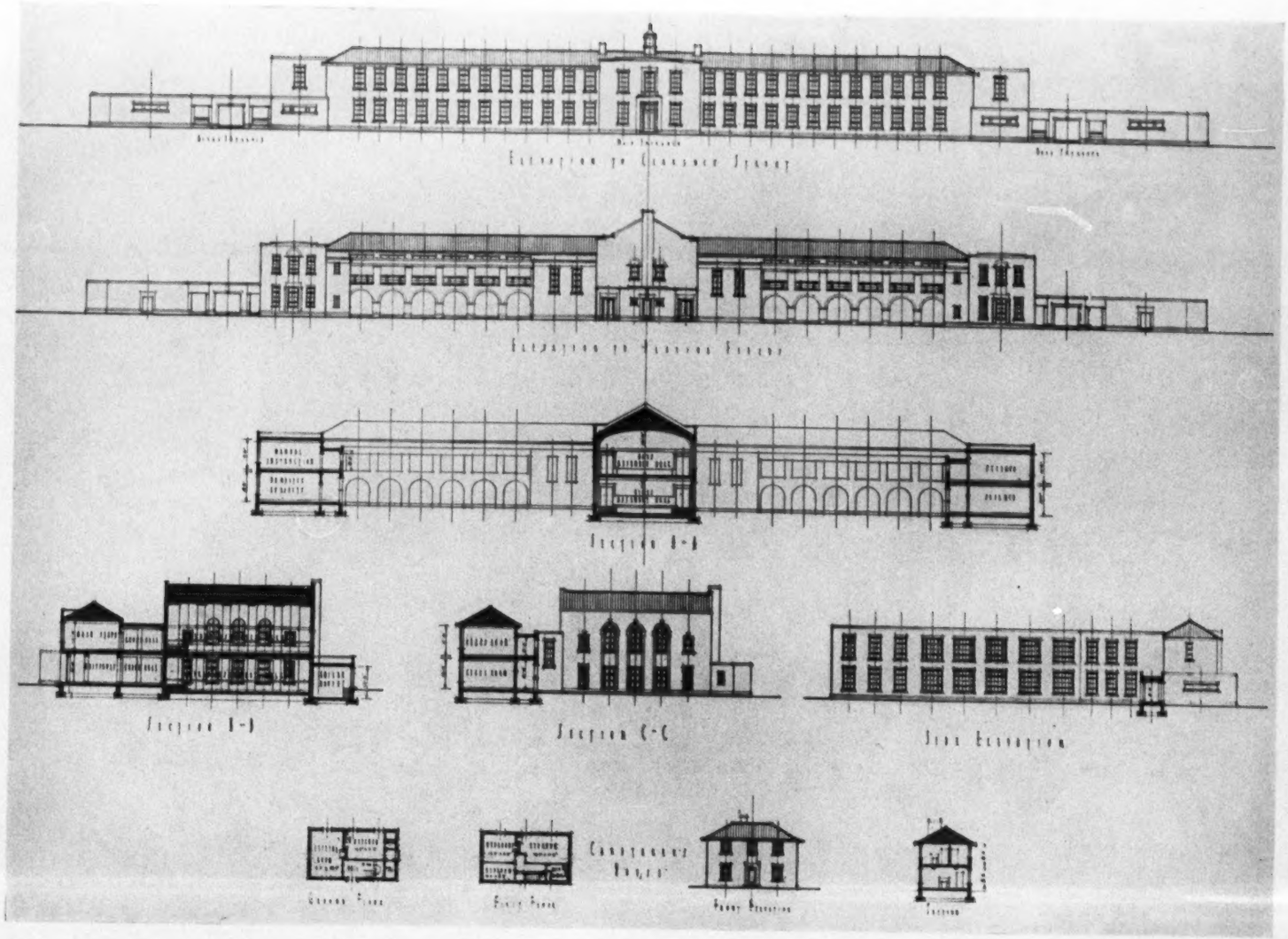
A House at Radlett, Herts.

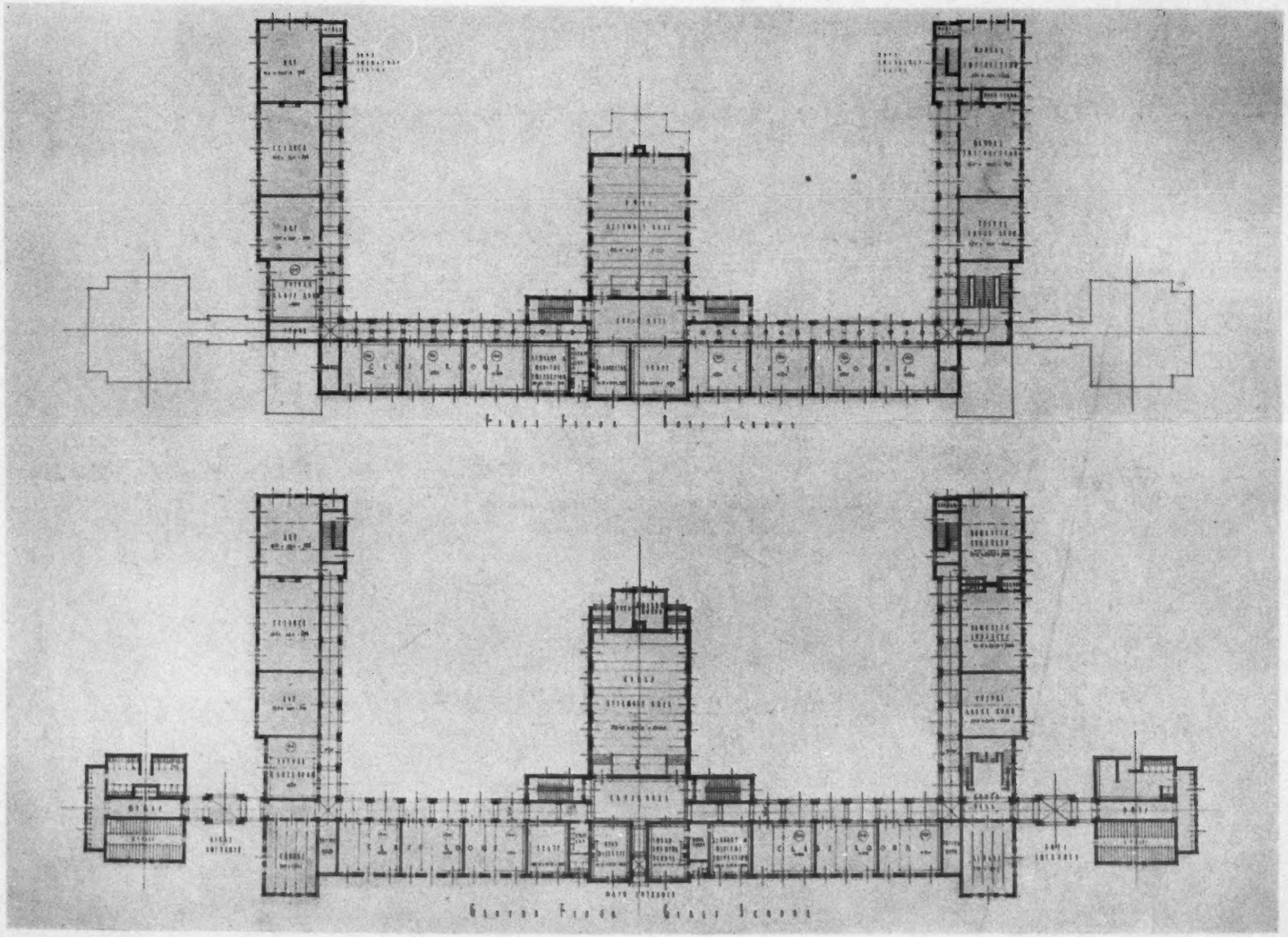
MESSRS. PITE, SON & FAIRWEATHER, FF.R.I.B.A., Architects.



New County School for Boys, Beckenham and Penge.

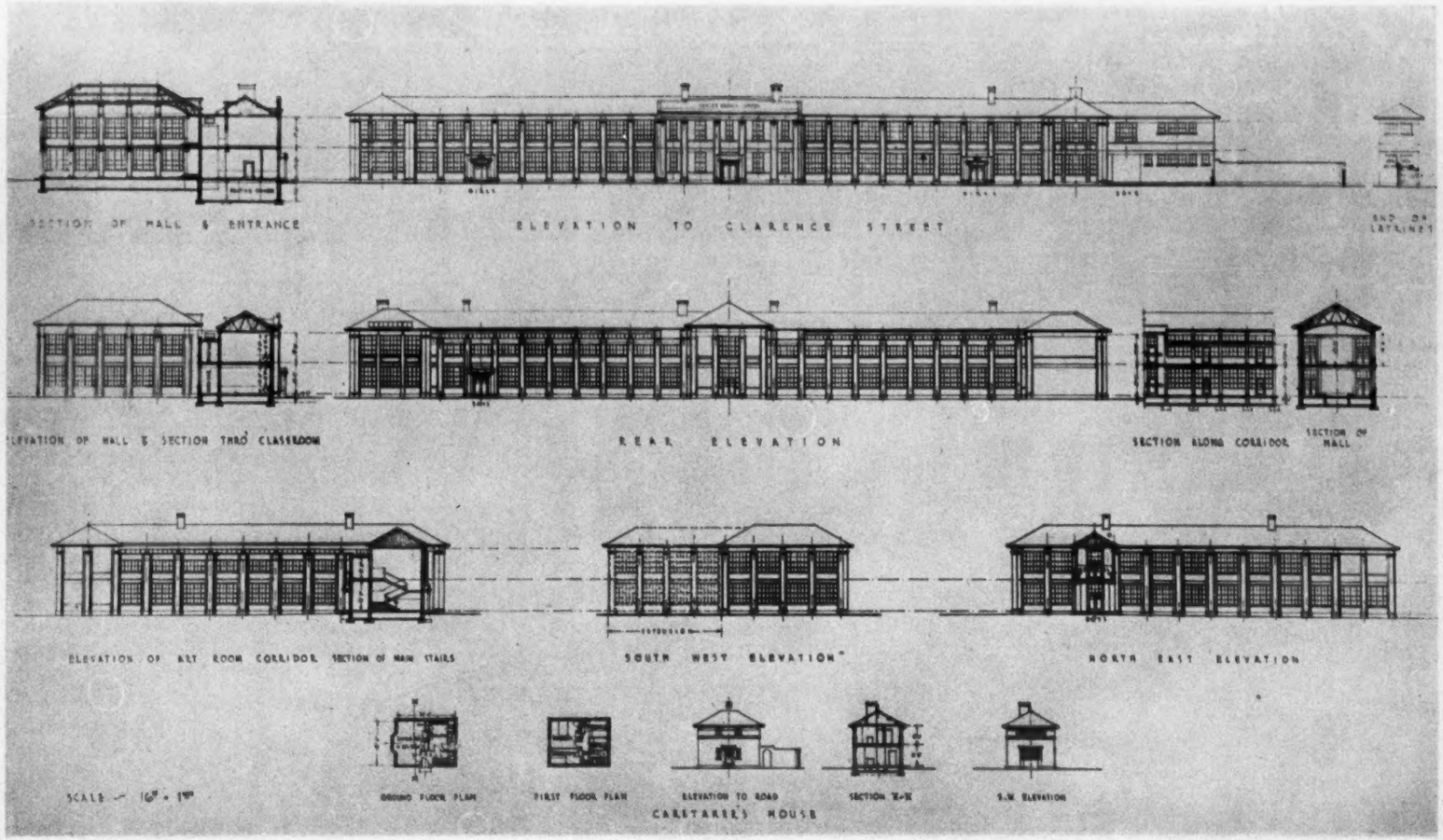
Mr. W. H. Robinson, F.R.I.B.A., Architect.

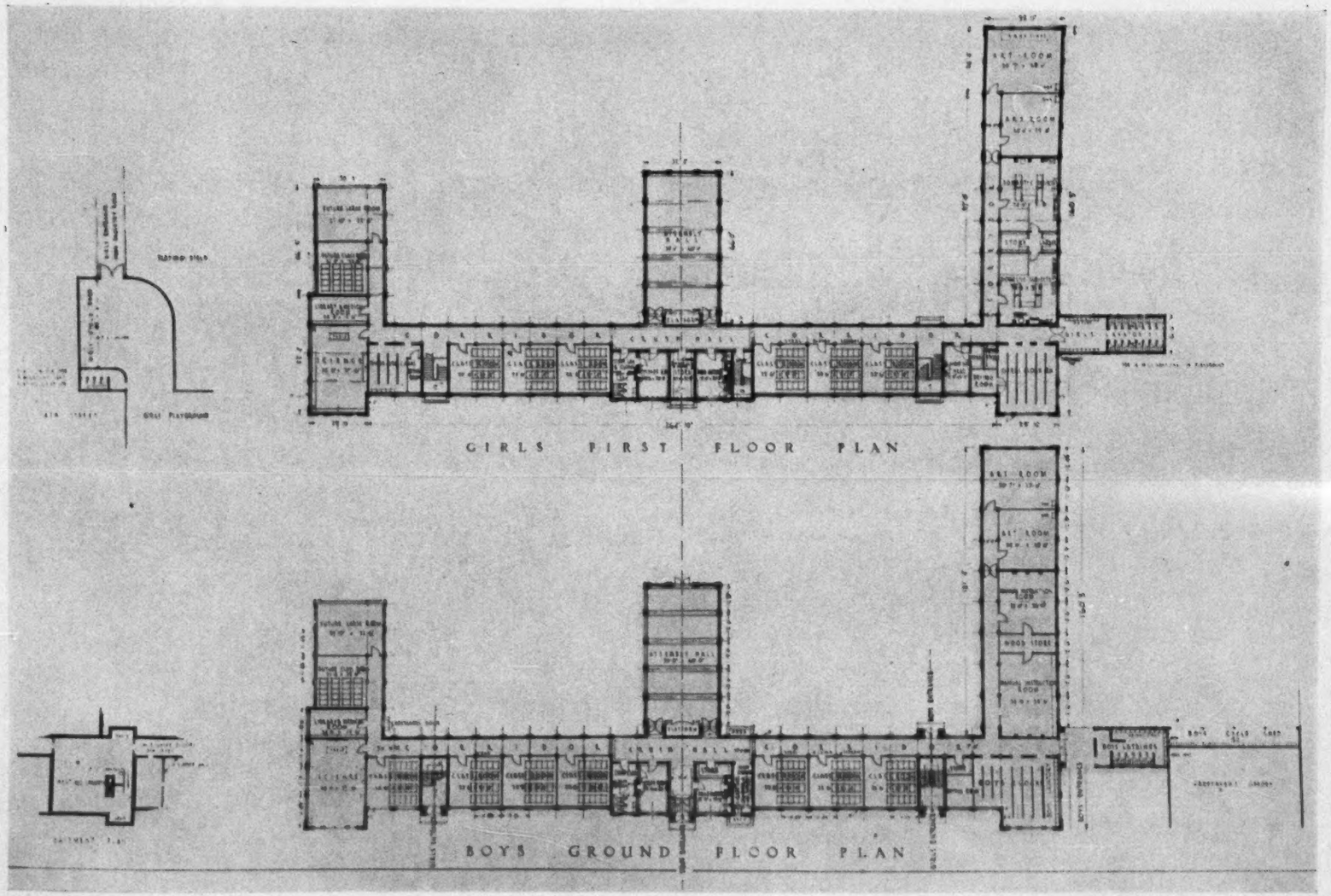




Competition for New Senior Schools, Clarence Street, Burton-upon-Trent: First Premiated Design.

MESSRS. HOME AND KNIGHT, FF.R.I.B.A., Architects.


SECTION OF HALL & ENTRANCE
ELEVATION TO CLARENCE STREET
END OF LATRINES
ELEVATION OF HALL & SECTION THRO' CLASSROOM
REAR ELEVATION
SECTION ALONG CORRIDOR
SECTION OF HALL
ELEVATION OF ART ROOM CORRIDOR SECTION OF MAIN STAIRS
SOUTH WEST ELEVATION
NORTH EAST ELEVATION
SCALE — 16' = 1"
GROUND FLOOR PLAN
FIRST FLOOR PLAN
ELEVATION TO ROAD
SECTION X-X
S.W. ELEVATION
CARETAKER'S HOUSE



Competition for New Senior Schools, Clarence Street, Burton-upon-Trent: Second Premiated Design.

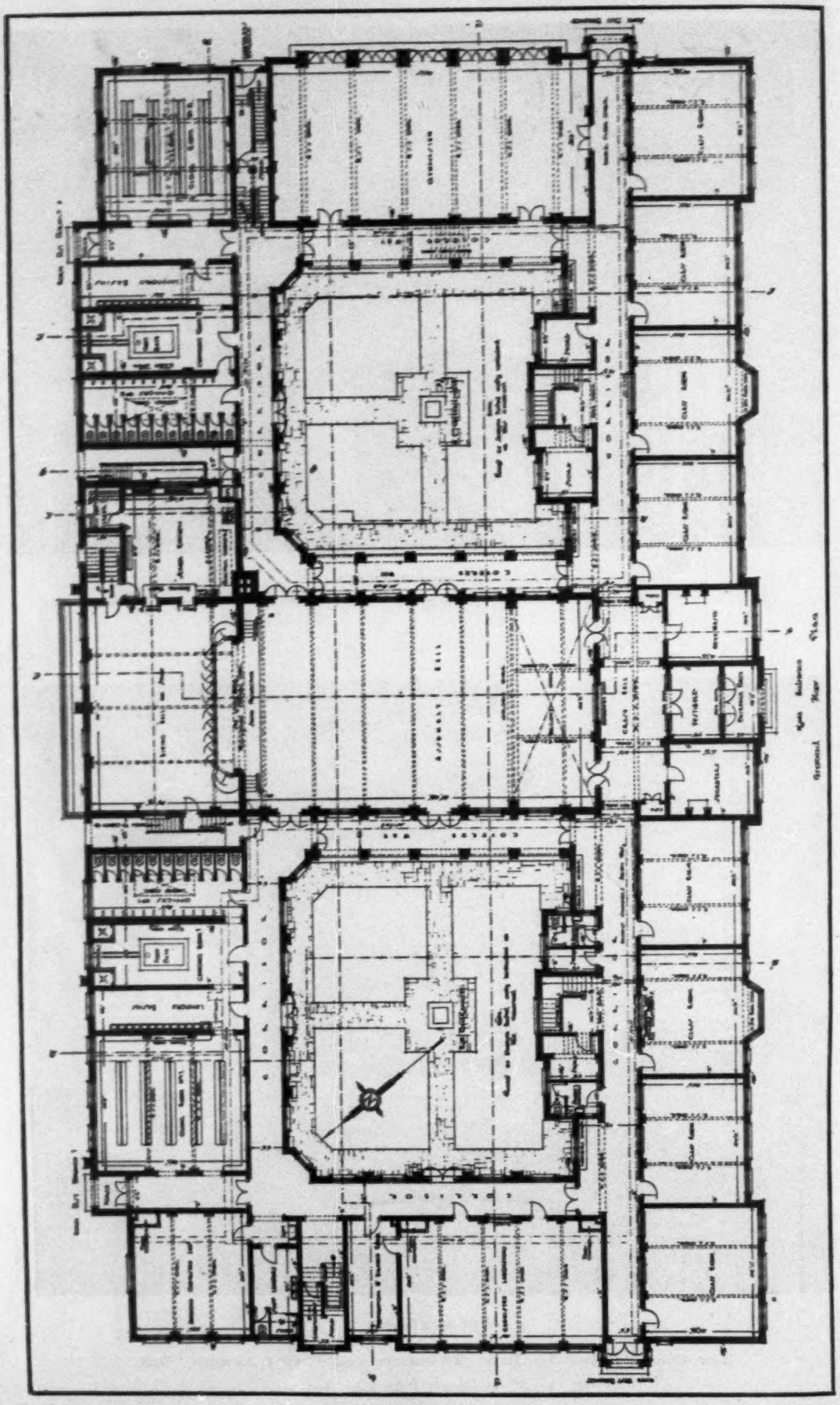
By Messrs. F. S. Antliff and Son.

VIEW FROM BALCONY.

VIEW FROM STAGE.

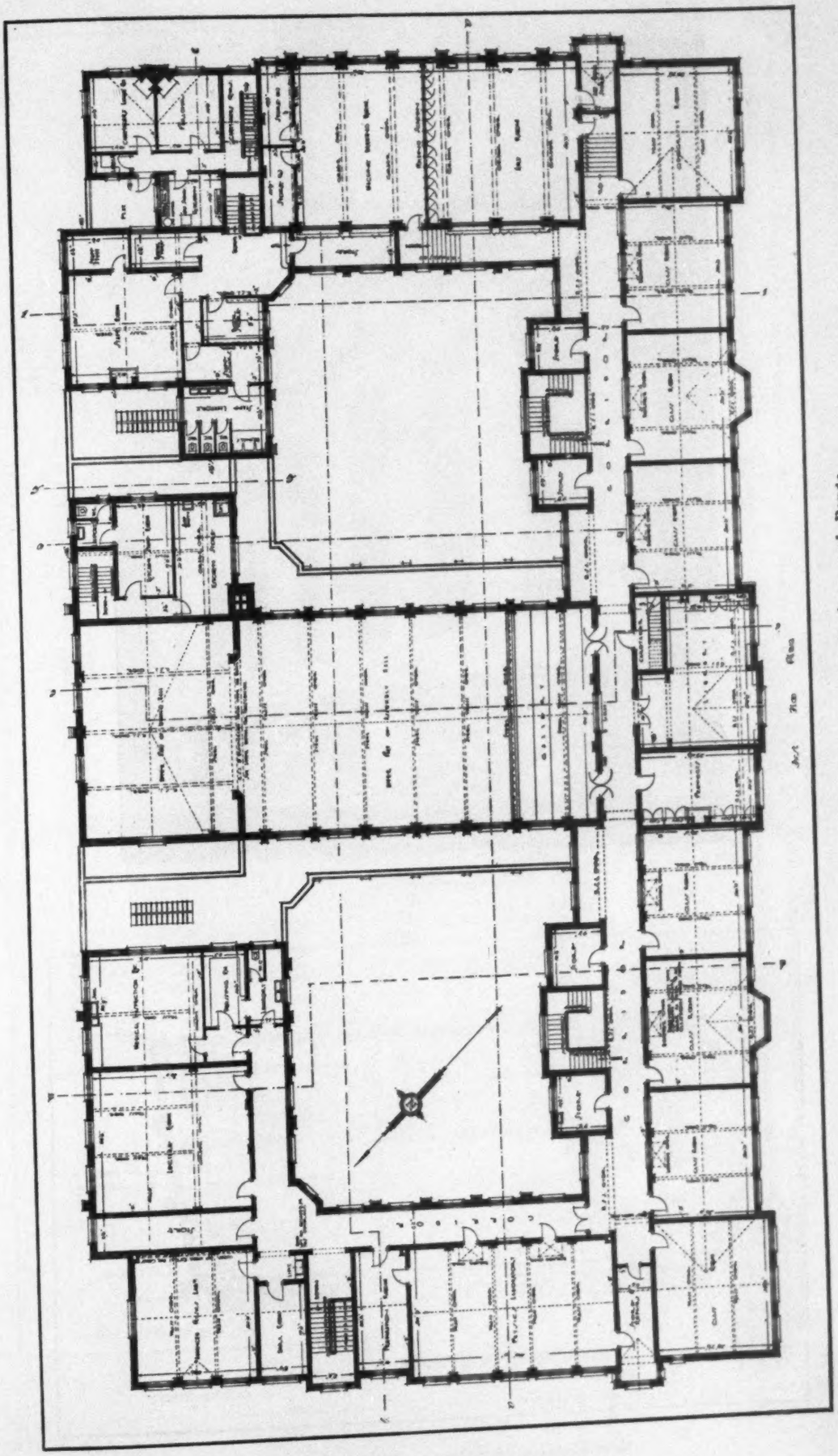
New County School for Boys, Beckenham and Penge: Assembly Hall.

MR. W. H. ROBINSON, F.R.I.B.A., Architect.



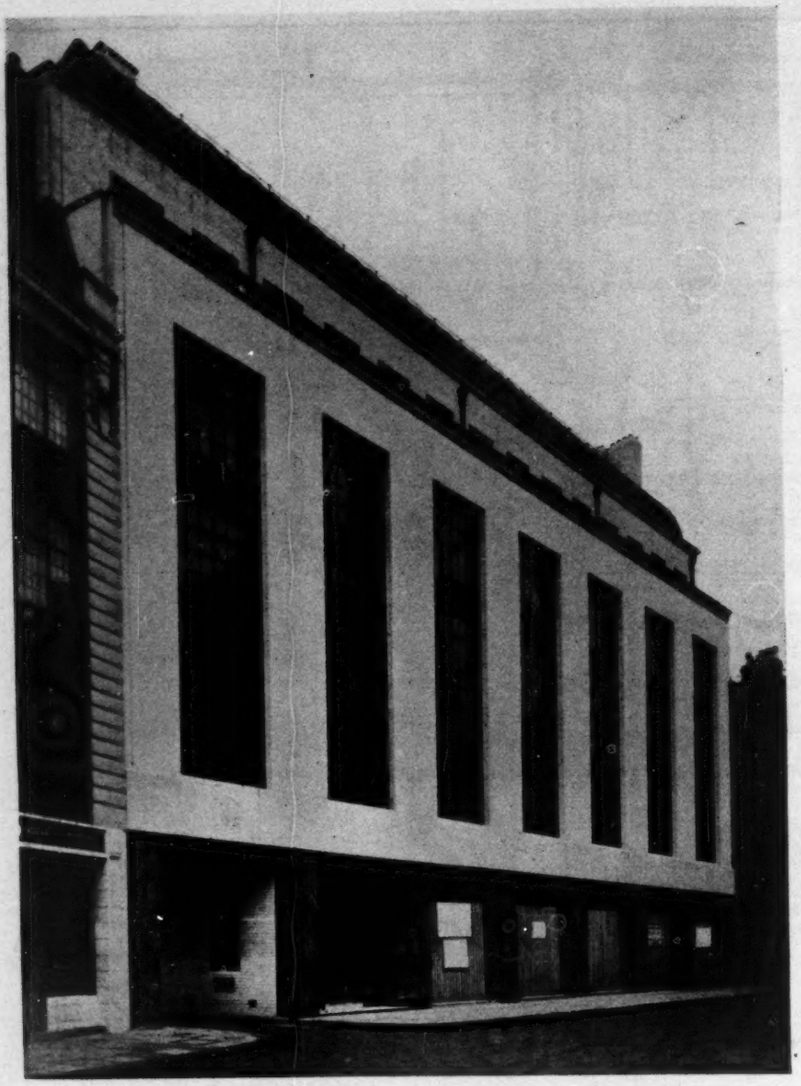
New County School for Boys, Beckenham and Penge.

Mr. W. H. Robinson, F.R.I.B.A., Architect.

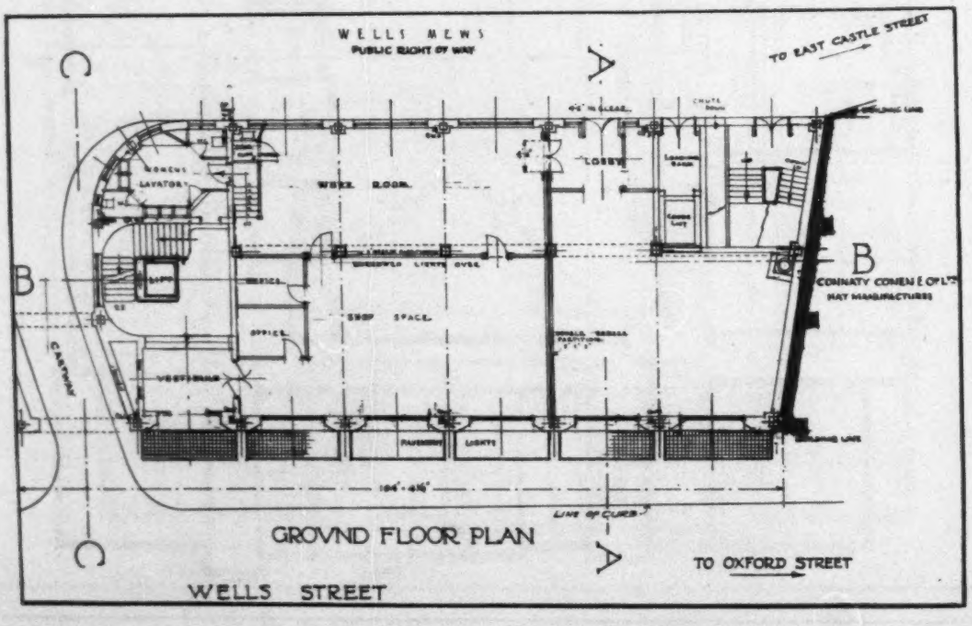


New County School for Boys, Beckenham and Penge.

MR. W. H. ROBINSON, F.R.I.B.A., Architect.

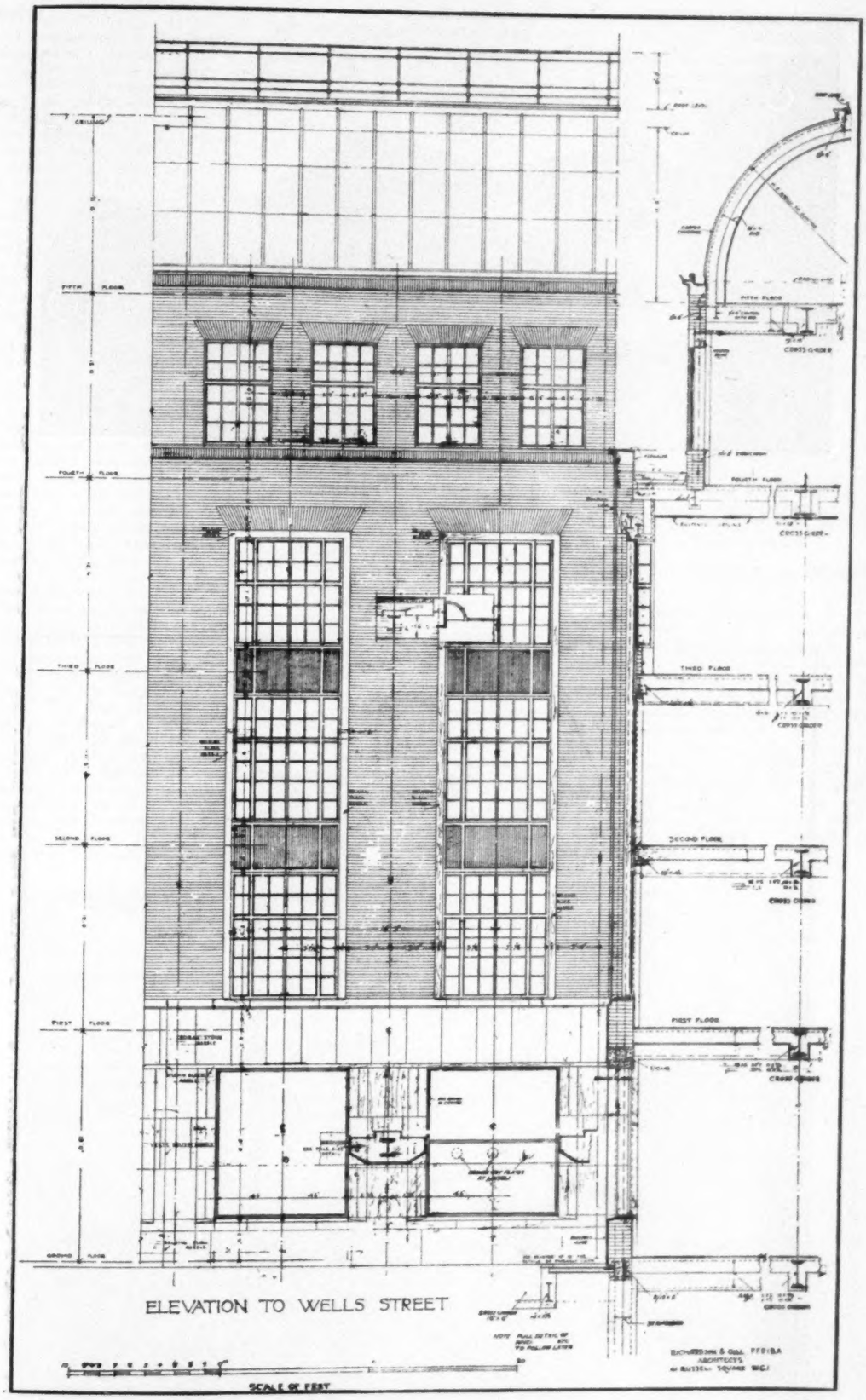


FRONT ELEVATION.



New Business Premises, 19-23, Wells Street, W.

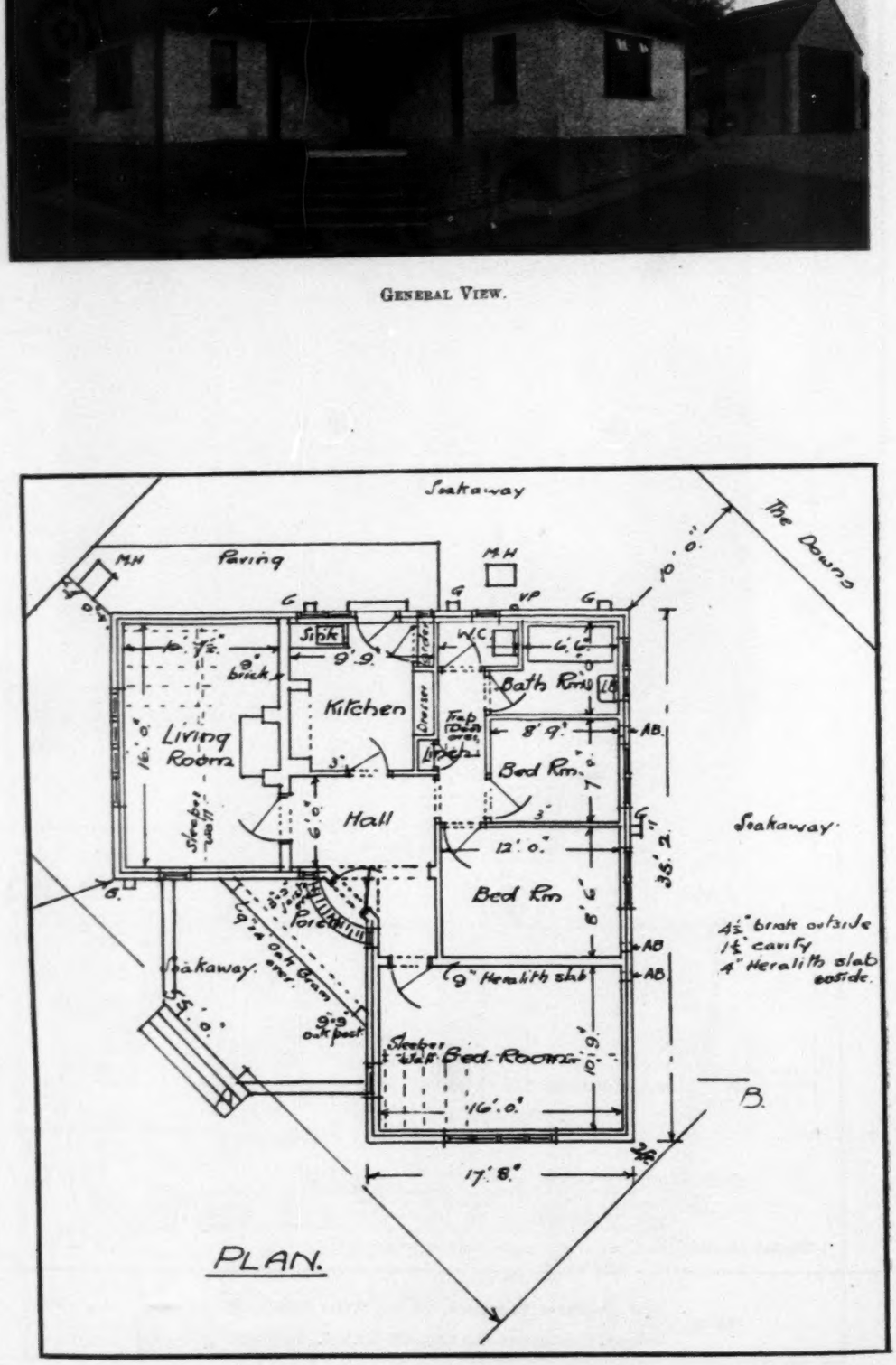
MESSRS. RICHARDSON AND GILL, FF.R.I.B.A., Architects.



New Business Premises, 19-23, Wells Street, W.

MESSRS. RICHARDSON AND GILL, FF.R.I.B.A., Architects

General View.



A Bungalow on Epsom Downs, Surrey.

Messrs. Williams, Pettett and Gardner, Architects.

SOCIETIES AND INSTITUTIONS

THE COLLEGE OF ESTATE MANAGEMENT.

House Construction.

In the first of two lectures at the College of Estate Management recently, Mr. T. W. A. Hayward, late borough engineer of Battersea, dealt with the subject of urban sanitation, and more particularly with the individual house. In erecting the house, he said, the proper utilisation of damp-proof courses in walls and underneath floors was of paramount importance. Attention should be paid to the proper pointing of brickwork and masonry, a thing often neglected, as frequently damp walls were traced to this defect. Gutters in the roofs should be avoided as much as possible. Overhanging eaves were to be preferred wherever they could be obtained. Rainwater gutters must have proper falls, and all outlets should be carefully protected. With regard to the inside of the house, efficient ventilation without resort to mechanical methods inappropriate to a small dwelling was the first essential. In the modern villa or house with, say, ten rooms, it was a good plan to have a central well-lighted and well-ventilated staircase. An anthracite stove in the hall or hot-water radiators would assist the ventilation, outlet ventilators being placed at several suitable points. If the central staircase was well ventilated, the rooms surrounding it would get air, and there would be less likelihood of producing draughts than if the air were brought directly in from outside into the living rooms.

On the subject of warming the house, the lecturer said that here again, in the small house, warming should be treated in the simplest manner. The coal fire in the principal living room with gas fires or electric radiators or oil stoves as required in other rooms not regularly in use suggested itself as the best plan. The coal fire might be classed as wasteful in regard to consumption of fuel, but when the grate and flue were well designed, it became of great assistance not only as a diffuser of heat, but as an essential factor in ventilation. The electric stove was an ideal system, healthy and clean, and when electrical energy became less expensive it would be in great demand. Gas fires also had become popular in recent years, and with improvements in manufacture, would supply a long-felt need. The lecturer also dealt upon the arrangements and design of bathrooms and lavatories, deprecating any economy which would have the effect of cutting down to the minimum the size of the bathroom or the bath. Strong enamel baths should be specified, with plain tops, and fixed clear of all woodwork.

NORTHERN ARCHITECTURAL ASSOCIATION.

At a meeting of this Association, held on January 14, Mr. E. R. Jarrett of the Architectural Association gave a lecture on "Architectural Draughtsmanship." The lecturer divided his subject into three broad divisions namely: The drawing of existing buildings; the designing of new buildings; and the constructional drawings necessary to carry out those designs. The first division, he said, consisted, from the architect's point of view, mainly of sketches and measured drawings in ink, pencil, and water-colour, for the different technique required for such media as etching, oil-painting, and wood-cuts made them unusual methods of expression amongst architects.

The lecturer emphasised the direct bearing of his first division upon his second. That the man who had measured and drawn, and learnt to feel his materials in three dimensions, by so doing would, when confronted with a problem in design, be in a definitely superior position to that of anyone relying on books or photographs. The lecturer defended the rendered drawing on the grounds that it again impressed upon the student that he was an artist in the solid, and not in the flat.

Passing to his third heading, the lecturer said he did not intend to be dogmatic upon such a debatable subject as the best method of preparing working drawings. Any man with a sound knowledge of construction who had accustomed himself to feeling his buildings in three dimensions should be able to present his design in an able, intelligent manner to the builder.

The lecture was illustrated by a series of slides showing examples of draughtsmanship from such widely differing sources as Rembrandt, Canaletto, Rickards, Eric Mendlesohn, and recent winners of the Tite prize.

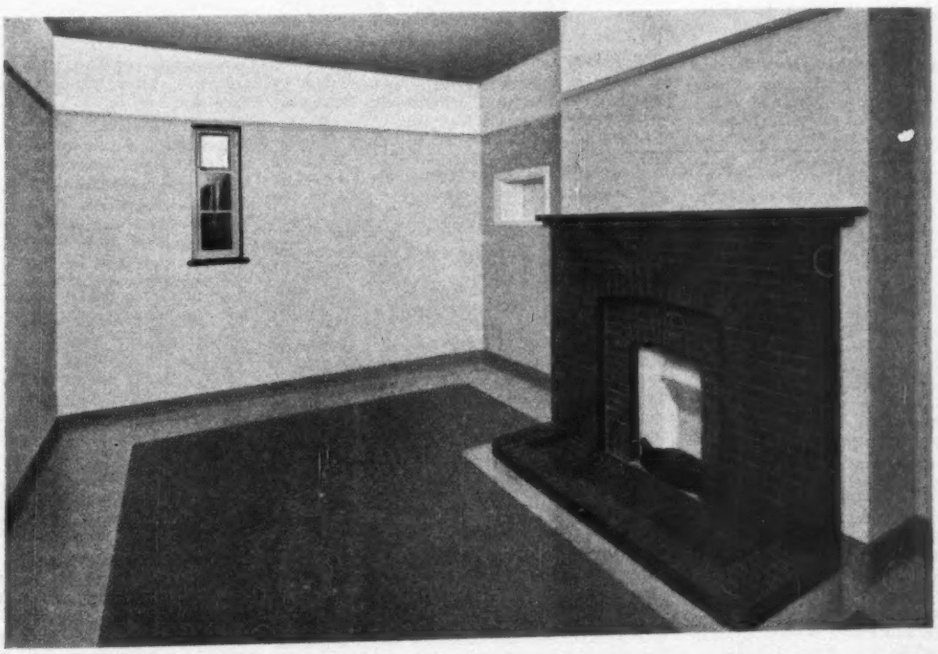
SOUTH WALES INSTITUTE OF ARCHITECTS.

The Council of the South Wales Institute of Architects, after their meeting on January 15, visited the showrooms of the General Electric Co., Cardiff, on the invitation of the district manager, Mr. W. E. Hobbs. The party first visited the electric kitchen, and saw a variety of electrically-equipped domestic apparatus, and then, after passing through the fitting showroom, laid out in sections showing various types and designs of fittings, the stockrooms were visited. The industrial showroom was next inspected, where the more commercial apparatus was displayed, including furnace gear, heavy cooking and hot-water apparatus, etc. In this department an interesting display of stage-lighting effects and colour-mixing was given by Mr. D. C. James, the district illuminating engineer. A lantern lecture was then given by Mr. E. H. Penwarden, who dealt with the great developments that have taken place in modern electrical illuminations.

A hearty vote of thanks to the General Electric Co. for their hospitality, and for the interesting lecture and other arrangements which had been made, was proposed by Mr. T. Alwyn Lloyd, F.R.I.B.A., President of the South Wales Institute of Architects, and carried with acclamation.

SCOTTISH ARCHITECTS.

At the monthly meeting of the Council of the Royal Incorporation of Architects in Scotland, held at 15, Rutland-square, Edinburgh—Mr. W. L. Duncan, F.R.I.B.A., Turriff, vice-president, in the chair—Mr. John Watson, Junr., A.R.I.B.A., of Glasgow, was appointed editor of the "Quarterly." The following were elected as members of the Incorporation:—G. A. Mitchell, Aberdeen; William Paterson, A. E. Horsfield, and M. M. Ochterlony, all of Edinburgh, as Fellows; F. B. Thomson and William MacKenzie, both of Edinburgh, as Associates; and D. MacD. Kirkpatrick, Edinburgh; R. M'P. W. Young, Troon; and N. R. J. Johnston, Glasgow, as Students.



A Bungalow on Epsom Downs, Surrey: Dining Room, showing servery through to kitchen.

MESSRS. WILLIAMS, PETTETT AND GARDNER, Architects.

THE SLUM DWELLERS' CHARTER

The Housing Act, No. 2, of 1930, the passing of which was secured by the Government in the last days of the Session, marks a new and important advance in the attack on the slums in the attempt to secure an improved standard of dwelling for the poorer stratum of the population. This must be gratifying to those organisations of benevolent effort and propaganda whose advocacy of better conditions has not always been mindful of either the financial aspect of the problem or the realisation of the truth that slums have been created as much by the dwellers themselves as by the "grasping" landlord.

Parliament has since 1890 accepted the principle that the owner of slum property must be called upon to suffer some sacrifice of his property for the common good. From that date onwards the expropriation of his property by local authorities has led to an increasing reduction of the standard of compensation for the compulsory acquisition of his property when it reached a condition considered by the local authority and the Ministry of Health to justify the administrative action of acquisition and destruction. In the Housing Act of 1919 it was laid down that property offending the standard therein set up could be acquired at site value only, and even at less in certain circumstances. In the latest Act Parliament has reaffirmed this basis.

While perhaps some of the owners of slum property deserve little sympathy, it cannot be denied that among owners of this class of property there are many ignorant and unthinking people of very slender means. These people, seeking to derive the maximum income from their little and often entire capital, have, through the plausible advocacy of such property by zealous agents, been tempted to invest in it, more frequently with the assistance of a mortgage, in its equitable interest. The reluctance and frequently the inability of such owners to find money for the heavy and increasing repair of that property has contributed in no small measure to the appalling conditions of which modern housing standards have made us less tolerant. So much for the landlords.

Parliament, in giving powers to enable local authorities to deal with slum areas, has required them to provide accommodation to replace that destroyed. This has not meant that such accommodation is necessarily intended for, or is within the means of, the displaced population. In practice the displaced slum dwellers have been divided into two classes sharply contrasted: those whose circumstances and desires have enabled them to change their lives by occupying the infinitely better but seriously more expensive modern homes, and those who cannot afford, or will not make the effort and sacrifice to afford, those better homes. This latter class is apt to migrate to inferior dwellings, where their habits contribute to the aggravation of undesirable conditions. The present Act makes some attempt to meet this difficulty by rent rebates to those of smaller means. How far this may be a subsidy to employers of cheap labour or a dole to the inefficient need not be here discussed, but anything which may encourage in some a leaning towards self-respecting home conditions is worth some effort and expense, even if it offends in some degree economic principles.

Part I of the new Act provides for the clearance and improvement of unhealthy areas in the following manner. The local authority, after satisfying themselves that their resources are sufficient, and that suitable accommodation for the displaced population either exists or can be provided in advance, declare an area to be a clearance area, and by an order to be confirmed by the Minister of Health after any necessary public inquiry proceed to secure the demolition of the property, either by the owner himself, and in his default by the local authority at his expense, or by purchase and demolition by the authority. In the latter case, after the buildings are vacated and pulled down, the land may be appropriated for any of the purposes for which the local authority is entitled to hold land. The authority may, alternatively, sell or lease the land either before or after demolition, provided the demolition is ensured and subject to restrictions and conditions considered after approval by the Minister fit to impose.

In order that a local authority may define a clearance area they must satisfy themselves and subsequently the Minister of Health :—

(1) that dwelling houses in that area are by reason of disrepair or sanitary defects unfit for human habitation or are by reason of their bad arrangement or the narrowness or bad arrangement of the streets dangerous or injurious to the health of the inhabitants of the area, and that the other buildings, if any, in the area are for a like reason dangerous or injurious to the health of the said inhabitants, and

(2) that the most satisfactory method of dealing with the conditions in the area is the demolition of all the buildings in the area.

Sanitary defects in this connection include lack of air space or of ventilation, darkness, dampness, absence of adequate and readily accessible water supply or sanitary accommodation, or of other conveniences, and inadequate paving or drainage of courts, yards or passages.

Where the local authority elect to acquire the property in the clearance area they may purchase by agreement or by compulsory powers, in which case an order confirmed by the Minister is required, and the basis of compensation is that of the value of the land cleared of buildings, reduced where any part of the area is to be devoted to re-housing by an amount depending on the effect on value of such limitation of use. This diminishing amount is spread proportionately over the whole clearance area. The above basis of compensation is not new and was adopted in the Housing Act of 1919, and has been the subject of much controversy. It is now reasserted, but has been modified in a few respects. The devotion of any part of the area to an open space, formerly causing a reduction in the compensation value, no longer has that effect. Further, in order to alleviate certain hardships found to occur in this basis, local authorities are given power, by Section 41, to make allowances towards an occupier's expense of removal or loss of business through his removal.

Land, colloquially property, excluded by reason of its better condition from the clearance area, either within its external boundaries, as islands, or adjoining the external boundaries and reasonably necessary for convenience of the shape, dimensions, or for satisfactory development, or user of the clearance area, may be acquired by the local authority by agreement or by compulsory powers under an order when the compensation is assessed under the Acquisition of Land Act, 1919, the general statute regulating the basis of compensation for acquisition for public purposes, as modified by circumstances of illegal use or insanitary condition.

The Act provides also for the improvement of areas where the conditions are not so extreme as to justify the demolition of all the buildings. The local authority, on being satisfied that the housing conditions in an area can be remedied by :—

(1) the demolition or repair of unfit houses,

(2) the purchase of land for opening up the area, and

(3) the abatement of overcrowding,

and upon satisfying the Minister of Health that they may be remedied within a reasonable period, and that suitable accommodation for the displaced persons can be secured in advance of displacements, may define such area as an improvement area. The local authority thereafter are to require the demolition of or execution of work to unfit houses, purchase land, or otherwise secure the opening out of the area and enforce by-laws for the improvement of the housing conditions and its maintenance.

Part II of the Act deals with individual houses which are unfit for human habitation, as distinguished from the aggregations of such houses to be dealt with under Part I. Upon the local authority being satisfied that the house is unfit, they shall require the person who receives, or would if let receive, the rack rent of the property, to execute works specified by them to render the house fit unless they are satisfied that the house is not capable of being made fit at a reasonable expense. The local authority have the power on default of entering and doing the work, and of charging the person above defined, but there is also provision for recovering such charge with interest by way of periodical payments spread over a period not exceeding thirty (30) years. This payment may be collected from the owner or occupier, the latter having the power of deducting the instalments from his rent. The expense of the work done by the local authority is a charge on the property with power of enforcement under the Law of Property Act, 1925.

In the case of a house incapable of being rendered fit at reasonable expense, the local authority are required to serve upon the person having control of the house, upon the owner, and where practicable upon the mortgagee, a notice to that effect and giving such persons the opportunity of making proposals as to the execution of the work or the future user of the house. The local authority may, after consultation with the owner or mortgagee, accept an undertaking that the house will be rendered fit or not used for human habitation. If no undertaking is given, or if given is contravened, the local authority may make a demolition order. This part of the Act extends equally to parts of buildings as separate tenements or to underground rooms with the substitution of closing orders for demolition orders. A person aggrieved by notices, demands or orders under this part of the Act may appeal to the County Court under rules to be made. The local authority may purchase compulsorily by means of an order any property which on appeal the County Court find cannot be rendered fit at reasonable expense, the compensation being based on its value as a site cleared of buildings as determined in accordance with the Acquisition of Land Act, 1919. Such, briefly, is the outline of the procedure for the clearance and improvement of slum property, so far as owners are concerned.

Part III deals with the provision of accommodation to meet the needs of the displaced population. In the current year and in each succeeding fifth year councils of boroughs and urban districts with a population exceeding 20,000 are to furnish to the Minister of Health a general statement of the measures to be taken within the following five years to deal with the housing conditions in their area and the provision of further housing accommodation. To the extent of the number of houses provided for the accommodation of persons displaced by the local authority's action in dealing with clearance and improvement areas, the demolition of unfit houses and for the closing of parts of buildings, special conditions attach to houses to satisfy this demand in order to attract Exchequer assistance. These conditions are as follows:—

(1) That the houses shall be let for occupation to tenants who intend to reside therein.

(2) That it shall be a term that the tenants shall not part with possession without consent.

(3) That the local authority, while having liberty in fixing the rents, shall not charge in the aggregate, and after allowing for any rebates made to tenants deserving special consideration, rents greater than

that ascertained by the following calculation:—

The cost of the houses and land is converted to an annual equivalent spread over 60 years, to which is added a reasonable allowance for annual repairs, maintenance, etc. From this annual sum is deducted the annual equivalent for 60 years of the Exchequer and Rate subsidies which are for a 40 year period. The balance is the maximum amount of rent chargeable in respect of the whole of the houses.

The contribution from the Exchequer for the purpose of assisting local authorities in dealing with the work under Parts 1 and 2 is made dependent on the number of persons shown to be necessarily displaced and to the extent of the number for whom accommodation has to be rendered available in new houses or, in alternative accommodation, already existing in property owned by the authority.

The annual amount of such contribution for a period of 40 years is defined to be £2 5s. per person displaced, increased, in respect of agricultural parishes, to £2 10s. and to £3 where the accommodation is in buildings of more than three stories or the site costs more than £3,000 per acre.

In order that such assistance shall be obtained it is necessary for the local authority to make a contribution from the rates of an annual minimum amount of £3 15s. per house for a similar period.

Provision is made for arrangements to be entered into by local authorities with any society, body of trustees, or company, not trading for profit or prohibited from making more than a limited rate of interest, established for, among other purposes, the construction, facilitating, or encouraging construction of dwelling-houses for the working classes to provide the new houses for displaced persons. Such arrangements include an annual grant by the local authority subject to the observance by the society, etc., of the special conditions as regards rent.

On application to the County Court the judge may order the determination, on terms imposed, of the lease, underlease, or tenancy of premises the subject of a clearance or demolition order.

Local authorities under the Housing Act of 1925 are empowered to advance money not exceeding 90 per cent. of the value to persons constructing or altering houses not exceeding in freehold value £1,500. The present Act extends this power to advances in respect of expenditure on repairs where such assistance is reasonably necessary. While the general standards of size of new houses laid down by the Housing Act of 1923 is maintained, local authorities are empowered to provide smaller houses for aged persons, the minimum dimensions being subject to the determination of the Minister. The Government contributions in such cases are reduced to two-thirds the normal amount and the rents will be governed in similar proportions.

Such, briefly, are the provisions of the Housing Act of 1930, which makes some attempt to simplify and co-ordinate the housing activity of local authorities in the clearance and improvement of slum areas with the provision of additional accommodation to satisfy any deficiency found by systematic review of the housing conditions of the working classes in all parts of the Council's areas.

Supplementing the general duties of local authorities, special provision is made for the building of houses in rural districts where overcrowding or unsatisfactory housing conditions exist. The duty is imposed on the county councils of giving constant regard to the housing conditions of the county, and to the sufficiency of the steps which the councils of the districts are taking to remedy unsatisfactory conditions, and to meet any need for further building. County councils are required to bear a minimum charge of £1 per annum for 40 years towards the cost of each house so provided.

The Ministry of Health have issued a circular to local authorities describing the scope of the Act and setting out the procedure necessary. They have also published the Provisional Orders and Regulations made under the authority of the Act. Draft Model By-laws have also been framed for adoption subject to any local modification found necessary, which are required by the Act to be in force in an improvement area. These by-laws lay down minimum requirements as to structural necessities for safety, sanitation and ventilation and define the relative responsibility of owners, occupiers and lodgers in regard to the avoidance of overcrowding, the maintenance of repair and cleanliness, including food protection. Overcrowding is to be measured at 40 sq. ft. of room space per head of those above school age, such measurement to be adjusted for space less than 8 ft. in height.

It will be seen from this general description of the powers given to local authorities to ameliorate local undesirable conditions in which their working classes live that very far-reaching opportunities are afforded. The initiative is, however, with the authorities themselves. These bodies will have many local circumstances and conditions to take into account, not least of which is the matter of their financial resources However the expenditure is minimised by statutory and administrative action, the improvement of housing conditions for the poorer sections of the working classes cannot be effected without heavy expense.

The serious effect of new commitments on the general body of ratepayers is a vital consideration. It must not be overlooked that the effect of industrial derating has confined this section of the community largely to householders, the majority of whom are finding it more and more difficult to shoulder the burden of rates in the present and probably continued period of trade depression. Many difficult problems, too, will arise in the course of the administration of the Act, and the remedial measures must inevitably be spread over a long time.

ROYAL INSTITUTE OF BRITISH ARCHITECTS

We continue from our last issue the notes from the minutes of the Council for December 1, 1930:—

R.I.B.A. Maintenance Scholarships in Architecture.—The Board reported that the following awards had been made:—

(*a*) Hubert Bennett (£100), School of Arch., Univ. of Manchester; A. K. Brown (£50), School of Arch., Armstrong College, Newcastle-on-Tyne; F. W. Wright (£100), School of Arch., Univ. of Sheffield; G. G. Laidler (R.I.B.A. Fourth and Fifth Year Maintenance Scholarship (£100), A.A.; J. F. D. Wylson (A.G.B.I. Maintenance Scholarship, £100), School of Architecture, A.A.

(*b*) An R.I.B.A. Maintenance Scholarship of £100, tenable for one year and renewable for two further periods of one year each upon evidence of satisfactory progress to Ralph Dickinson (Birmingham School of Arch).

The R.I.B.A. Howard Colls Travelling Studentship at the A.A., 1930:—The Board reported that the Studentship had been awarded to Miss Charlotte Gray.

The R.I.B.A. (Donaldson) Medal at the Bartlett School of Architecture, Univ. of London, 1930.—The Board reported that the Medal had been awarded to Mr. E. F. Starling.

Representation on the Board of Architectural Education.—On the recommendation of the Board it was decided that the Association of Head Mistresses be invited annually to appoint a representative to the Board of Architectural Education.

Petrol Stations in Residential Areas; Exportation of Historical Buildings.—On the recommendation of the Allied Societies' Conference it was decided to support and submit to the Ministry of Health the following resolutions proposed by the South-Eastern Society of Architects:—

Petrol Stations.—"In the fresh legislation contemplated by the Ministry of Health, it is hoped that some such clause may be incorporated that will enable local authorities to preserve for the enjoyment of the public the amenities of any street, road or locality, and of avoiding obstruction or danger in regard to traffic therein by reason of the establishment of petrol stations."

Historical Buildings.—"It is also hoped that some legislation may be introduced to prevent the exportation of ancient buildings and monuments."

The Registration Bill.—The sincere thanks of the Council were conveyed to Col. T. C. R. Moore, M.P., for his services in taking up and presenting the Registration Bill.

The Society for the Protection of Ancient Buildings Scholarship Scheme.—It was decided to make a donation of £10 10s. towards the cost of this scholarship scheme.

The Architects' Benevolent Society.—It was decided to renew the annual grant of £150 to this Society.

Twelfth International Congress of Architects, Budapest, September, 1930.—The thanks of the Council were conveyed to Lt.-Col. H. P. Cart de Lafontaine for his report, as the R.I.B.A. delegate at this Congress, and it was decided to publish the report in the Journal.

Resignations.—The following resignations were accepted with regret:—Percival William Hawkins, A.R.I.B.A., Herbert Athill Stallwood, L.R.I.B.A.

Election of Students.—The following probationers were elected as Students of the R.I.B.A.:—

B. McEwen Bell (Univ. of London).
A. C. Bennett (Liverpool School of Arch.).
Helen M. Bryce (Edinburgh Col. of Art).
S. A. Comben (Univ. of London).
S. L. W. Copnall (Liverpool School of Arch.).
A. G. S. Fidler (Liverpool School of Arch.).
K. W. Gearey (Liverpool School of Arch.).
M. E. Herman (Univ. of Sydney).
G. B. Hobbs (Special Exemption).
R. P. S. Hubbard (Liverpool School of Arch.).
Pamela D. Jackson (A.A.).
D. M. Jones (Liverpool School of Arch.).
R. H. Jubb (Manchester Univ.).
B. B. Lewis (Liverpool School of Arch.).
Jean McIntosh (Liverpool School of Arch.).
D. W. Naylor (Leeds Col. of Art).
J. A. Pinckheard (Northern Poly.).
C. E. Plews (Liverpool School of Arch.).
Max Policansky (Liverpool School of Arch.).
A. Roberts (Liverpool School of Arch.).
A. M. Sayers (A.A.).
C. J. Searle (A.A.).
T. H. Thoms (Glasgow School of Arch).
H. Wyatt (Liverpool School of Arch.)

District Surveyor and Building Surveyor Examinations.

The R.I.B.A Statutory Examination for the office of District Surveyor under the London Building Acts, and the Examination for the office of Building Surveyor under Local Authorities, will be held at the R.I.B.A., London, on May 6, 7, and 8. The closing date for receiving applications for admission to the examinations, accompanied by the fee of £3 3s., is April 15. Full particulars of the examinations and application forms can be obtained from the Secretary, R.I.B.A.

R.I.B.A.: Tite Prize and Soane Medallion, 1931.—Preliminary Competitions.

The attention of intending competitors is called to the fact that the preliminary competitions for the Tite Prize and the Soane Medallion will be held in London and at centres in the provinces on Thursday, March 5, and Friday, March 6, respectively. Forms of application for admission to the preliminary competitions may be obtained at the R.I.B.A., 9, Conduit-street, W.1. The closing date for the submission of forms of application is Tuesday, February 24.

PERSIAN ARCHITECTURE

On Thursday afternoon, January 15, Dr. A. Upham Pope gave a lecture at the R.I.B.A., 9, Conduit-street, W., on "Some Features of Persian Architecture." Sir Banister Fletcher, who presided, introduced the lecturer as an American professor and director of an art museum, who had taken a leading part in organising the wonderful exhibition now being held at Burlington House. Probably there was no one with a greater knowledge of Persian art and architecture than Dr. Pope, and certainly no one was more enthusiastic about it. He had written a book, "An Introduction to Persian Art," which was an epoch-making one. He had pronounced views on the origin of the pointed arch and vault and particularly the dome.

It was sometimes thought, said the lecturer, that Persian art was an affair of painted tea cups, porcelain palaces and singing bulbuls, but some of the most majestic forms ever seen were wrought and still stood in modern Persia. Persian architecture was often spoken of as a pasteboard sort of thing, gaily decorated. On the contrary, there was in it a majestic sense of weight and solidity. Persian builders thought in tri-dimensional form; they developed a great architecture, but never lost the sense of the solid structure. We owed a great deal to Persian architecture, and must pay our respects to it by beginning to understand it; but only a small number of its monuments had been thoroughly studied as yet. In all the treatises we were told that Persian architecture began in the Achæmenian period, but, looking back in history, we found further and very ancient traditions on which that architecture was built. We had seen in the new finds of this year evidence of certain important methods that played a part by the eighth century B.C. There were rock monuments, from which we could infer the type of the structures, but no buildings survived of an earlier date than the middle of the sixth century B.C. There were three styles of architecture, the Achæmenian from 530 B.C. to 330 B.C.; the Sassanian which followed, and lasted until 600 A.D., and afterwards the Islamic. This style was in full bloom by the ninth century, and from then until the eighteenth produced a succession of majestic masterpieces. Through all these periods, arch, vault and dome were common themes. In these three major forms of construction the Persian contribution was of the utmost moment. They added a surface ornamentation which was beautiful whether in shadow, relief, tiles or stucco.

Besides three styles, Persian architecture had three qualities which had distinguished it through all periods. First was a sense of scale. The Persians were a small people and never very rich, but they lived in a country formed in a great way. In Persia one was never out of sight of a mountain at least 10,000 ft high, and sometimes much more. The wide valleys lay clear in brilliant light. The scenery of the country had a quality of grandeur and splendour which the Persians had always felt and which had shown itself in their art. Besides the sense of scale, the Persians had an extraordinary sense for plastic form, an enthusiasm for beautiful shapes and contours and for the abstract line which should express in its own way some specific emotion. Finally, there was the sense of colour. Persian buildings were often resplendent in many colours merged in harmony. These qualities were not enough in themselves to make great architecture or great art; there must be the quality which the French called *volonté*. The sense of scale, form and colour must be merged in a high individuality; all the qualities must be blended to one expression of a point of view. This quality of volonté, or intention, the Persians had in a high degree.

A succession of slides followed. The first showed a column dating from 630 B.C., but still standing in Western Kurdistan. On this, said the lecturer, was a beautifully developed Ionic flute. There was not on Greek soil an Ionic capital of as early a date. He did not claim that the Ionic capital was a Persian invention—it was derived from Asia Minor—but Greek architecture owed a great deal to early Persian, rather than early Persia being indebted to Greece.

Another slide showed the Hall of Xerxes at Persepolis, with the ruins of the palace of Darius. Here, said the lecturer, the architecture reflected the result of the conquest of Egypt, but was more lucid, more rational and better ordered than the Egyptian. The columns, 68 ft. high, were carried to a perfection then new in the world's history. Quite recently a contract had been given by the Persian Government to the Architectural Institute of Chicago to reassemble the Palace of Darius. The whole platform was to be cleaned up, and the shattered and broken stones reassembled something after the plan of the restoration at Palmyra.

Showing other slides of buildings decorated with bulls and bulls' heads, the lecturer said that according to the ancient Persian religion horned beasts were man's potent allies in the great struggle between good and evil that was for ever going on. Achæmenian culture gathered material from all surrounding countries and fused them into a new formula. Assyrian and Hittite motives were taken in their clumsy and raw brutality and given new elements of grace and imagination.

Passing over 500 years the lecturer showed the palace of Chosroes at Ctesiphon, of which the arch still stands. He said he was not entirely sure whether this building was of the third or fourth century B.C. In the age-long and victorious struggle which Persia carried on to maintain her independence from Rome, many Roman masons and architects were captured, and these imported certain styles of architecture into Persia. But in the Palace of Chosroes we were dealing not with a new invention, but with things as old as Ur. Here was the beginning of the Persian contribution to the vault. This vault was 120 ft. high and 70 ft. at the springing of the arch. In the ornamentation of the façade of the Palace we saw, perhaps, the beginning of the development of certain façades of Gothic kind. In the case of the Persian building there might have been good reasons for the rows of statues one above another. The vault was less Roman than Gothic.

Showing further slides, the lecturer said the earliest mosque still standing on the soil of Persia was one at Nayin. It could not be dated later than 1000 A.D. Here there were intercepting vaults and the pointed arch developed very clearly. There was almost the essence of Gothic construction. The entire weight and thrust of the vault were taken up by a series of arches and carried by columns to the ground, the walls being curtains only. Another mosque at Shiraz might be of about the same date, and there was a small one at Kazvin which was a little later These were all centuries before the constructional use of the pointed arch in Europe. In the Masjid-i-Jami at Isfahan, a monument of the fourteenth century, there was also the pointed arch, which by then was universally used. Here the arch was less than 100 ft. high, but there was the same sense of majestic space as in the arch of Ctesiphon.

Other slides showed the pointed arch united with hemispherical vaults and enriched with beautiful tiles. The Persian arch, said the lecturer, maintained its purity down to the eighteenth century; the work of that period was still fresh, delicate and elegant.

Showing other slides, the lecturer said that the setting of a dome over a square was a great architectural problem. A great bell placed over a circular colonnade or round drum was not a real solution, for the building below the dome was felt to be only a support with no character of its own. But in Persia, undoubtedly in Achæmenian times, the problem of the dome over the square had been solved in a great way, æsthetically and mechanically. The Persian method had been by means of the squinch. The square was reduced to an octagon, and then further reduced until by the device of corbelling, it merged beautifully and nobly with the dome itself.

Views of a number of domes were shown, and one plan to show how the dome was carried on pointed arches. The domes were unencumbered; the haunches were not tied up with weights and counter-weights, but stood free. The use of a slight double dome gave them a gravitation-defying force and majesty. The domes were built without centreing, this method of building being necessary in an almost treeless country.

Persian architecture was not confined to the arch, vault and dome. From the ninth and tenth centuries onwards there was a considerable development of post and lintel. This was the architecture of the mountain valleys where there was timber. But the arch, vault and dome were essentially the indigenous architecture of Persia. The stalactite was an early form of ornamentation of the vault in Persian architecture. It was developed in a richer form in the 18th century. It was not structural, but an enrichment of the structure.

A number of slides showed beautiful ornamentation with stucco and tiles. The decoration, said the lecturer, was always a glowing and rich garment and never a burden. Another kind of surface ornament was brick—sometimes the brickwork itself, sometimes the inter-position of ornament in terra-cotta, sometimes a lace-like pattern in raised brick. The greatest triumph in the way of surface covering was the mosaic faience of the 13th century. The colours were quite beyond imagination. Views of Madan I Shah and of the Masjid Luff Ullah showed how a Persian mosque appears when viewed in its entirety and amidst its native scenery.

As to how the pointed arch reached Europe from Persia, the lecturer said it probably came through Samara and Bagdad. The pointed arch was used in the Nilometer, near Cairo, dated 861, and at Ibn Tulun, in 869. It was used about the same period in a cistern at Ramleh, in Palestine. All these were still standing. From the East the pointed arch had reached Palermo, where the Normans had adopted it. There was a good deal more intercourse between Europe and the East in the Middle Ages than was generally thought. Crowds of pilgrims, who were hardly to be distinguished from tourists, left Marseilles for the Holy Land. There were regulations to control the traffic and prevent over-crowding though, according to a modern standard, an over-crowding actually took place which was really terrible. Information on this matter was to be found in the works of two French authors, Monsieur Jean Ebersolt, who had written about Oriental influences on the Western world before the Crusades, and Monsieur Gustav Soulier, who had written on Oriental influences on Tuscan painting.

Mr. H. M. Fletcher said that the question was irrelevant of whether vaults, arches and domes were invented here or there when one was looking at such photographs as they had seen. Everything Dr. Pope had shown his audience had been full of beauty of one kind or another. Those who had been to the Exhibition of Persian Art could fill in, to some extent, the colour of the photographs.

Mr. Martin S. Briggs said Dr. Pope was a privileged person, able to go where others could not, but on many occasions he had been so much afraid of being lynched by the Mullahs in the mosques that he had only got away with a snapshot.

A vote of thanks was unanimously accorded.

INSTITUTION OF STRUCTURAL ENGINEERS

"THAMES HOUSE."

At a meeting of this Institution, held on Thursday, January 8, Mr. R. Travers Morgan, A.M.Inst.C.E., M.Inst.Struct.E., read a paper on "Thames House." These buildings, he said, consisted of two large blocks, adjoining "Imperial Chemical House," in Grosvenor-road, with a river frontage of 560 ft. The architect was Sir Frank Baines, K.C.V.O., C.B.E., F.R.I.B.A. The two blocks stood each on an island site, both with frontages on to the river, and surrounded on the remaining sides by streets averaging 55 ft. in width, the total frontages being 1,652 ft. The immense frontages were all of Portland stone with a base of polished blue granite, in order to avoid the ugly effect of grime and dirt which was so often to be seen on the Portland stone bases of London buildings. The two blocks were connected by a bridge across the intervening Page-street, at the third and fourth floor levels, in addition to those floors below Page-street, which were continuous from one end to the other of the site.

There were eleven floors in each block. Corridors were over three miles in length, and basements gave the largest basement area in any building in this country. Each block had a centre lighting court with wall faces tiled, a special feature being the architectural treatment of the tiling by means of golden buff tiles, thereby affording relief and avoiding the flat, hard appearance generally found in lighting courts. The courts were 40 ft. wide and 120 ft. and 104 ft. long in the two blocks. They were absolutely clear of all pipes, the services of the lavatories, etc., being in special areas set apart for these purposes.

Artificial lighting of daylight quality was supplied through large ceiling panels set flush with the soffit. The heating of the blocks was on the panel system, and the hot water supplying it was obtained from four boilers of the Lancashire type. The amount of piping used in the system was nearly 80 miles. A great innovation was the individual control of the heat in any particular room, this being the first building in the world with this automatic system of control for panel heating. By means of the refrigerating plant, water, near freezing-point, could be circulated through the system in the summer.

Commenting on the speed with which erection had taken place, the lecturer said the total tonnage of steel was approximately 11,500 tons. Erection was begun in October, 1929, and was completed by June, 1930. This meant that in eight months the steel frame had been erected at the average rate of 350 tons per week, with a peak load of 1,080 tons in one week. It was not only as regards the steel frame that record speed was maintained, but throughout every branch of the building trades. There were 770,000 sq. ft. of hollow tile flooring, and a peak of 40,000 sq. ft. had been laid in one week.

The foundations were designed by Mr. Dalrymple-Hay, M.Inst.C.E., and were of great interest, mainly on account of the large mass concrete retaining wall around the site. Trial borings showed the site to be covered with made ground to a depth varying from 6 ft. to 12 ft. This was followed by layers of mud, peat and treacherous sand of varying thicknesses, and, finally, a thin, uneven layer of Thames ballast. This latter, a few feet thick in places, rested on the London blue clay, which was situated 25 ft. to 32 ft. below the ground level. The whole of this building, weighing 250,000 tons approximately, was carried directly on the blue clay. Tidal water reacted on the whole site, and in order to deal with the hydraulic pressure the site was surrounded by the retaining wall.

The mass concrete retaining wall was constructed as follows: Two lines of piles having been driven, diaphragms were inserted at intervals between, and the contained earth excavated to the required depth. A course of bricks was then laid upon the floor of the trench, and against the outer wall of piling a brick wall 9 in. thick was constructed lined inside with asphalt. The retaining wall was then cast against this asphalted brick wall, 17 ft. thick at the base, reducing by offsets and batter to 5 ft. at the top. This wall, which was 27 tons per ft. run, contained 18,000 yds. of concrete. The enclosed space of bulk excavation was carried on simultaneously by means of a Ruston drag line excavator. The total excavation was 150,000 tons, and was removed at the approximate rate of 1,000 tons a day.

Concrete blocks having been set to carry the stanchion grillages, the whole site within the retaining wall was covered with a bed of concrete. The retaining wall, being entirely separate from the building, was capable of withstanding the full hydraulic pressure, and consequently the steel frame was erected from ideal foundations without any hindrance whatsoever, and this undoubtedly facilitated later operations.

The steelwork was designed in accordance with the requirements of the London County Council with the following concessions:—

(1) A stress of 8 tons per sq. in. in tension and compression for all plain and plated joists.

(2) A stress of 8 tons per sq. in. in tension, but a varying stress in compression for all plate girders, in accordance with the following formula:—Outside edges stiffened 8 (1-0.0075 L/B) tons per sq. in., outside edges unstiffened 8 (1-0.01 L/B) tons per sq. in. where L=greatest unsupported length of flange, B=breadth of flange.

(3) An increase of stanchion stresses of 1/15th of the stresses allowed by the London County Council, 1909. Steel Frame Act.

(4) A reduction to 70 lb. per sq. ft. superimposed load for all office floors, provided that main girders should have an allowance for light partitioning.

The method of carrying the heavy arched bridge connecting the two blocks across Page-street was of interest. The stone forming the arch ring, together with the spandril walls above, were not carried on steel arches, the stone arch being left to perform this work, but the steel frame had to take the dead weight and the thrust. The arches sprang off steel abutments, which were provided on four heavily-plated three-joist section stanchions. These stanchions continued up to carry the two heavy girders which carried the bridge over the street, taking the whole of the load from the third and fourth floor levels, together with the stone features surmounting the whole bridge. In order to take the thrust from the steel abutments, the stanchions to which they were attached were braced back to the heavy bridge girders above. Finally, the soffit of the arched bridge between the stone rings was carried on a series of built-up steel arch rings. This soffit was formed of tiles, heavily coffered, which keyed into the steel rings.

The steeply pitched roof was of special interest; the front slope, pitched at an angle of 49 deg., is sheeted with boarding, covered with lead and bitumen, over which rest the slabs of specially designed faience. The back slope, pitched at an angle of 69 deg., was boarded and slated. All steel was delivered on to the site with one coat of cement wash. A further coat of cement wash was applied before the concrete casing was cast.

The preliminary plans supplied by the architect were extremely full, and this enabled accurate estimation of the dead loads to be carried to be closely estimated. These plans were again supplemented with information giving the exact position of all walls in relation to the stanchions, which enabled the exact eccentricities of loads to be computed for all stanchions.

Eleven and a half thousand tons of steel were erected in thirty-three weeks, an average of approximately 350 tons per week, with a peak erection of 1,080 tons in one week, a record for this country. Actually, an allowance of 5½ weeks was made to the contractors for bad weather and other delays, thus bringing the average up to over 400 tons per week. This speed of construction had been carried out not only in the steel frame, but also in every trade concerned throughout the whole building by means of organisation, with minute care of even the smallest details to ensure absolute continuity of operations.

One-eighth inch scale plans and cross-sections of the two blocks were sent first by the architect to the consulting engineers. Accompanying these were the plans of each floor, showing the lay-out of the steel beams. This information, apart from being extremely useful, helped considerably in speeding up the steel design, since subsequent alterations to the steel beam lay-out to suit internal architectural treatment was almost entirely obviated.

As the preliminary plans, showing the sizes of the beams in the various floors, were finished, copies were sent to the architect. At the same time, preliminary stanchion schedules were prepared, together with foundation plans of the blocks giving the load carried by each stanchion. Standard types of grillages having been settled for various loads, it was possible to prepare and have ready for issue the plans of the foundations at an early date.

Before the calculations were finally checked and the plans finished, the architect supplied a plan of each floor showing the positions of the stanchions and the relation of same to the walls. This enabled very accurate calculations to be made for all loading, and, in particular, of all eccentric loading on to the stanchions. In addition to the general plans for all staircases, lift walls, and any portion of the building not straightforward in planning, large-scale architectural details were prepared. The amount of information supplied by the architect was extremely full, and most certainly had the effect of speeding up the design of the steel frame.

Quantities having been taken and the necessary bills prepared, a contract for the steel frame was obtained on May 9, 1929. At this date the site had been cleared ready for the commencement of sheet piling and excavation. The meeting, called by the architect, of the contractors concerned discussed the date when the site would be ready to receive the first grillages. This being fixed at September 14, allowed the steel contractors good time to organise for preparation of shop drawings, rolling, manufacture, delivery and erection, the whole of their programme being submitted to the architect for his approval. The steel frame was then divided into sections, care being taken to ensure that each section could be erected from the foundations to the roof independently of the adjacent sections.

The general contractors having given the earliest dates when the foundations in the various sections would be ready to receive the steel frame, the steel contractors estimated the weight of steel in each section. A scheme of erection having been prepared by the steel contractors, was submitted to the architect. It was then carefully overhauled and a revised and improved scheme was drawn up, this being adopted and carried out at the site.

Shop drawings for all steelwork were submitted for approval to the consulting engineers, and since this work was being carried out by independent drawing offices of sub-contractors, in addition to that of the main steel contractors, the number of drawings dealt with was considerable, reaching a maximum of 80 drawings in one day. As soon as approved, a copy of each drawing was sent to the engineers dealing with inspection, and every member of the steel frame was in this way inspected and passed at the works.

"A PLAN FOR LONDON"

This subject was discussed at a joint meeting of the London Society and Architecture Club, held at the premises of the Royal Society of Arts, Adelphi, W.C., on Friday last week. Mr. Carmichael Thomas was in the chair.

Mr. Ewart G. Culpin, who opened the discussion, said that lately many people had, for the first time, been discovering that there was a London, a disjointed London, a muddled London. They had realised that there was a task before them to get an orderly city. That task was a great one, for London could vary in size as one wished, from the 2 square miles of the City to the 2,000 square miles of Greater London. Control of that latter area was in the hands of nearly 300 authorities. If a plan for London was to come, there would have to be a co-ordination and a united interest—two virtues that could not at the present be said to exist. The work of the Greater London Regional Planning Committee, under the direction of Dr. Unwin, could not be praised too highly. It was a matter for profound regret and for amendment that that body had a hand to mouth and month to month existence. Moreover, it had no executive powers. The Committee should be made permanent and given powers to enforce its decisions. The result of the lack of those executive powers was that local "improvements" were made which were actually of dis-service to the community. The completion of a plan might take some time: New York had spent six years on a similar task, and London might take longer. But the time to start was now, when so many building leases were falling in. No one set out on a battle without a definite plan, and London was engaged in a battle—against squalor, waste and disorderliness. It must have a plan, and that plan was feasible, it was not unduly expensive, and he submitted that it should go forward at once.

Mr. Mervyn O'Gorman, speaking of the traffic problem, said that the great cities of the world had been saved from apoplexy by the merest chance—the invention of the automobile, which, within a smaller space than the horse and dray, took an increased volume of traffic at a faster rate through the same streets. In London, we could do one of two things: stifle London or have a plan for development. The first of these alternatives was impossible; one could not restrict a city that contained nearly 10 millions. One had to have a plan. The difficulty was the local authorities, many of whom refused to look upon the problem except as a local one. Traffic conditions, as they were at present, destroyed the sole reason for living in town, which was that the time-interval between the home and outside interests should be low. How were these traffic troubles to be relieved? It might sound paradoxical, but it was not necessary to widen roads that were now congested. It was the most expensive way. Certain avenues might be congested, as, for example, Piccadilly, but they were congested because, besides the traveller who wanted to get to Piccadilly Circus, there was also the traveller who had to pass through Piccadilly Circus because it was the only way he could get to Liverpool-street. A system of by-passing streets was, he felt, the solution.

Sir Josiah Stamp, speaking on the question of whether a plan would pay, emphasised the necessity for obtaining a just plan. The majority of the plans made in the past were bad. If one wanted an example of that one could look at the railways, which many years ago had been carefully planned in the wrong places. Would a plan pay? The question might be raised as to how far we were entitled to burden the present generation for the benefit of the future, and *vice versa*. In putting forward what would certainly be a very expensive proposal, it was to be asked: Would our craze for the new toy, "Speed," endure? Might it not happen that we should cease to rush about and, changing our attitude, prefer to sit and admire the view? That was a point to be considered, especially as the majority of plans which he had seen would not pay for themselves in this generation or the next. What kind of a plan was it to be, he would next ask? One thing was certain: it would not have to be a plan which benefited one section of the community at the expense of another. That would do no good. A tremendous boom in cinema profits did not benefit trade generally if, for example, a corresponding loss in tobacco profits was experienced.

Mr. A. C. Bossom, referring to the slum problem, said that the slum area of London had been whittled down bit by bit for years; but there was still a very considerable area that was bad. He would suggest a possible method of remedying the situation. In London there were some 40 miles of sunken railway tracks, amounting to about 350 acres of land. If they put iron posts or stanchions between the tracks, carried them to a height of about 16 ft., and then made a steel and concrete mat as a cover, they would provide land on which they could build tenements with perfect satisfaction, and at a third of the average present cost of obtaining suitable building land. This had been accomplished with great success in many parts of the world. The plan he recommended was that the problem be faced as a whole and provision made for 10,000 people in five-story buildings over sunken railways. Immediately these were completed the first 10,000 people from slums should be decanted into them, the slums pulled down and rebuilt, and the people moved back.

Mr. R. Holland-Martin said that no one could feel that the London of to-day had developed along the right lines. There were, in his opinion, large gains to be made from Mr. Bossom's plan: it would destroy the slums and make for better health. As to the main plan, it should be a comprehensive plan. Those who realised the urgency of its preparation would have their chance at the next municipal elections, when they could make it their business to see that their candidate pledged himself to aid in carrying out a scheme.

Dr. Raymond Unwin referred to the need for open spaces. New York, he said, had just voted 5½ million pounds for the purchase of playing fields. That huge sum of money had only bought 3,500 acres! In London we still had time to secure at a reasonable rate the very necessary additions to the existing spaces. It was only by having a well-considered plan that we could avoid the wasted improvement that had been made, as, for instance, at Oxford-circus and the Baker-street circus, where large sums of public money had been spent in cutting off the corners to form traffic roundabouts which proved to be impracticable. Either we had to reform those mistakes at enormous cost or else cut new traffic arteries.

Professor A. E. Richardson pointed out that previous speakers had omitted to mention that the London Society in the early years of the War had prepared an excellent plan for London: further, that it was hoped that Dr. Unwin's plan would shortly be published. The thing to do was to concentrate upon getting executive powers through.

The following resolution was then put to the meeting and carried:—

"That this meeting, convened by the London Society and the Architecture Club, is impressed with the vital importance of an authoritative plan to guide the development of Greater London (particularly the built-up area) and demands that immediate consideration will be given to practical measures for commencing such a plan at the earliest possible moment."

ARCHITECTURAL ASSOCIATION

CONTINENTAL ARCHITECTURE IN EVERYDAY LIFE.

Another series of popular lectures was begun last Saturday afternoon at the Architectural Association, Bedford-square, W.C., the lecturer being Mr. F. R. Yerbury, and his subject "Continental Architecture in Everyday Life." The lecture was illustrated by a large number of lantern slides, the object, said the lecturer, being to show structures that were not only practicable but were of such a character that they were lifted above the plane of mere building into the realm of architecture. Housing schemes naturally occupied the greater part of the address, the first examples being taken from Oslo. Norwegian housing schemes, said the lecturer, did not offer accommodation up to the British standard, and Norway had not "gone modern" to the same extent as some other countries; but a housing scheme of which he showed illustrations was adorned with a pool and sculpture, and shops connected with the scheme were so built as to be architecturally in harmony with it.

Showing other slides, the lecturer said that the general average of housing schemes in Denmark was higher than with us. As to Holland, Amsterdam had produced more sensation in building than any other city in Europe since the War. This was due almost entirely to the great lack of housing accommodation that had existed, and the recognition by the municipality of its obligations towards the people. The blocks of which the lecturer showed photographs were mostly erected by speculative builders helped by a subsidy from the Government or municipality. In addition to the District Surveyor there was what might be called a committee of taste in Amsterdam, and no building could be put up unless this committee had approved the design. Consequently, the builder, having planned the interior of his house, had to go to an architect for the facade. The architect's problem in such a case was often not an easy one, having to fit his elevation to the builder's plan.

Vienna had the most sumptuous housing schemes, viewed from the outside. The newest block, that named after Karl Marx, would house five thousand people; the decoration there, as elsewhere, had been carried out by some of the best painters and sculptors in Vienna. Every housing block had a kindergarden school, a laundry and a bath-house attached. The laundry was extremely well equipped and very efficient. The children could attend the kindergarten school without going out into the streets, and they could remain there all day. The child welfare movement had created a demand for an entirely new type of building. Had Austria had the same financial opportunities as France, or even Germany, we should have had from Vienna a real contribution to architectural style.

Among other interesting slides that were shown were some of a school at Copenhagen, where an old house and garden had been bought. The house had been replaced by a school, and the garden that had surrounded it remained as a playground planted with trees. Hospitals were shown, some built on a terrace plan, others to look as much as possible like country houses, and ornamented with pictures borrowed from the local art gallery. The swimming baths now being built all over Germany furnished a number of illustrations.

Numerous modern factories were shown. Exhibiting a building with an exterior entirely of steel and glass, the lecturer explained that this was the administrative block of a factory, and that the problem of keeping an even temperature was not as difficult as it appeared. In summer blinds were drawn down on the sunny side, and in winter there was plenty of waste heat from the factory to keep the building warm.

BUILDING REGULATIONS & BY-LAWS.—III.

By W. T. Creswell, Barrister-at-Law, Hon. A.R.I.B.A., etc.

CONFIRMATION OF BY-LAWS.

We have seen that provision is made in various Statutes for the confirmation of by-laws by the Ministry of Health, for instance, under the London Building Act, 1930, also under the Public Health Acts generally. But there are other Statutes in which provision is made for the confirmation of by-laws by some Government Department other than the Ministry of Health, for instance, by-laws made under Section 13 of the Public Health Act, 1890, in respect to telegraph apparatus; these must be confirmed by the Board of Trade; by-laws made under Part VII of the Public Health Act, 1907, in respect to the Police—these must be confirmed by the Home Office; by-laws made under the Electricity (Supply) Acts—these must be confirmed by the Ministry of Transport.

Building Plans.

Provision is usually made in by-laws for the giving of building notices, and for the deposit of plans and sections, by persons intending to construct new buildings or to lay out new streets; also, for the inspection of the work eventually carried out by the authority concerned. Generally, for the deposit of any plans in accordance with the requirements of a by-law, notice may be given in writing to the person depositing, declaring them to be of no effect if the work to which the plans relate is not commenced within a given period. Under Section 15 of the Public Health Acts Amendment Act, 1907 (where that Act is in force), the period is three years. In such cases—that is where the deposit of plans have been declared to be of no effect—plans must be re-deposited before the work can be commenced.

It is further provided that all plans, etc., deposited may be retained by the local authority. Such provision is made by Statute, under Section 216 of the London Building Act, 1930, and, outside the Metropolis, under Section 16 of the Public Health Acts Amendment Act, 1907. This last-mentioned Act is not, however, in force everywhere, and where it is not in force, plans deposited with a local authority cannot be retained by that authority without the consent of the owner of them.

Approval of Plans.

An authority is bound to approve or disapprove plans submitted within a given time, and under Section 158 of the Public Health Act, 1875, the period is one month.

If an authority disapproves plans, one of three courses can be taken. If the depositor is of opinion they comply with the by-laws, and the law generally, he can apply (*a*) to the Courts for a mandate to the authority to pass the plans, or (*b*) for a declaratory judgment under Order XXV, Rule 5, of the Rules of the Supreme Court that the by-laws are not contravened by the plans, or (*c*) he can commence the erection of the building and put in a defence to any proceedings which the local authority may take against him.

Any one of these three alternatives may prove expensive; the depositor therefore may elect to comply with the requirements of the local authority and amend his plans to accord with the interpretation the authority puts upon its own by-laws.

Unfortunately, there are instances where a local authority disapproves plans in ignorance of the law and on grounds which give no right in law for their rejection. We may again say that a local authority cannot contravene its own by-laws nor can it exact something over and beyond their requirements. Further, a local authority is not bound to give the depositor of plans reasons for their disapproval. This is a wrong which should be righted at once. The grounds for disapproval should be stated in writing and should be a right to which all depositors are entitled by Statute.

ILLUSTRATIONS

(*Continued from page* 188).

Haynes Bros., Ltd., Maidstone, electrical installation, bells and telephones; Medway Safety Lift Co., Ltd., lifts; Yannedis and Co., ironmongery; The Falkirk Iron Co., Ltd., kitchen cooking equipment; Doulton and Co., Ltd., and T. A. Harris, Ltd., sanitary fittings; Ambroses, Ltd., Maidstone, proscenium curtain; Ronuk, Ltd., wood floor finishings; Chittenden and Simmons, Ltd., Maidstone, tar paving; Bayliss, Jones and Bayliss, Ltd., fencing; The High Brooms Brick and Tile Co., Ltd., hand-made sand-faced red facing bricks and special moulded bricks. The coat of arms over the main entrance is in cast lead, and executed by Mr. H. Tingley, The Medway Guild, Chatham.

The architect is Mr. W. H. Robinson, F.R.I.B.A.

New Business Premises, Nos. 19/23, Wells-Street, W.

This building, recently completed for Messrs. Arthur Sanderson and Sons, Ltd., comprises shops on the ground floor and offices over. It is a steel-framed building with fireproof floors. The front elevation is faced in marble for the ground story and the remainder of the elevation is faced with 2 in. special hand-made white bricks; the cornices on the elevation are made of faience by the Leeds Fireclay Co., Ltd.

The general contractors were Messrs. Bovis (1928), Ltd., and the following were sub-contractors :—Wm. Edgar and Sons, Ltd., heating installation; W. J. Furse and Co., electric light; Waygood-Otis, Ltd., lifts; Anselm Odling and Co., marble work. The carving was executed by Mr. P. G. Bentham, A.R.B.S., and the architects were Messrs. Richardson and Gill, FF.R.I.B.A.

Bungalow on the Downs, Epsom, Surrey.

This bungalow is designed to give maximum room space with as little waste as possible on the inevitable corridor so difficult to obviate in bungalow construction. It is built on falling ground, which ensures a pleasant elevation, and the large partly roofed and partly open verandah, with low parapet wall, facing, as it does, due south, secures maximum benefit in sunshine, light and warmth. The principal objective was to erect a bungalow of reasonable accommodation, which when finished would involve the least possible amount of labour to run. To this end the floors are constructed of "Terrano" patent jointless flooring, laid direct on spade-finished concrete. This flooring has been panelled out and finished with hollow angle skirting, leaving no corners or the like where dust could collect.

All exterior walls are built on the cavity principle—the outer leaf being of 4½ in. brick, and the inner leaf of 4½ in. "Heraklith" slabs. These slabs, owing to the principle of their construction, are sound-, fire- and vermin-proof; and as they have also been used for the whole of the partition work and linings to ceilings and roof, penetration of noise from room to room has been eliminated.

The external stucco work has been done in magnesite, dashed with small black and white marble chippings. As magnesite is a material possessing high refractory and insulating properties, this stucco furnishes additional help in the provision of equable living conditions to the bungalow, and further secures economy in heating. The bungalow has been fitted for electric fires to all bedrooms, with but one open coal fire to dining-room. The hot-water system consists of "Ideal" domestic boiler, with calorifier supplying usual domestic fittings and heating radiators in bathroom and lounge. Vita glass has been fitted to principal rooms.

The garage building (some 12 ft. by 20 ft.) is constructed entirely of "Heraklith" slabs fixed to timber framework, the exterior surfaces being stuccoed with magnesite, and the internal surfaces covered with magnesite plaster; the flooring consists of spade-finished concrete covered with "Terrano" jointless flooring. The after portion of the garage is partitioned off, giving a room for mechanic's bench, etc.

The builder is Mr. G. Bent, of The Downs, Epsom, and the architects are Messrs. Williams, Pettett & Gardner, of Epsom.

INQUIRY BUREAU

Restoring Oak Chancel Screen.

[Replies to "Mr. Cecil A. Sharp," January 16.]

Sir,—The careful use of turps would probably be of advantage in getting rid of the stain before applying the lime treatment. It is quite likely that the pickling may arrive at the right tone without further treatment, but oak behaves very differently in different lots. My advice would be to try the turps first, and be prepared to proceed with the lime treatment if necessary.

Restorer.

Sir,—A solution of oxalic acid applied and washed off with a brush that will get well into the hollows of the carving 24 hours after will produce the effect desired. Or, test on an inconspicuous part near the base little bits with the acid and lime, and note results, which may prove interesting. I have faith in the acid, however.

John M. Fife.

Vent Flues.

Sir,—Is there any danger of weather penetrating and soaking down the stack through flues used only for ventilating purposes, and not having the compensating influence of the heat of a fire to counteract by evaporation? What steps are advised to obviate the risk?

Construction.

Boilers.

Sir,—Having received two tenders for a heating installation with some wide difference in price, I find this is largely accounted for by the fact that the higher tender included for a wrought boiler for the domestic supply, while the lower tender included for a cast boiler. Can you advise me as to the relative merits of the boilers, and whether the wrought boiler is necessary, or advisable?

Scales.

Polished Stone.

Sir,—I am anxious to use some polished stone columns in some such material as Hopton Wood. If this should be prohibitive, are there any similar stones which would make a reasonable alternative?

Economist.

Ownership of Drawings.

Sir,—To whom do the drawings of a building belong on the completion of a contract? It is assumed that the architect has been paid the proper fee. Can the owner of them use the drawings for other works? Can you give me any authority or authorities in this matter?

Legality.

[Under Section 5 (1) of the Copyright Act, 1911, the author, *i.e.*, the person who as a general rule makes the work, is, subject to certain exceptions, the first owner of the copyright. An architect employed to prepare plans, etc., for remuneration retains the copyright in them, even though such plans, etc., become, when paid for, and in the absence of any specific agreement to the contrary, the property of the employer.

It must be remembered, however, that an employer paying for plans, etc., can make what use of them he pleases, unless there is any restriction thereof in the contract between the employer and the architect. (See Gibbon *v.* Pease, 1905, 1 K.B. 810, and Chap. xiv., Creswell on Building Contracts.)—Ed.]

New Church, Mitcham.

The Bishop of Southwark has consecrated the new church of St. Olave, Mitcham, built from the designs of Mr. Arthur C. Martin, F.R.I.B.A.

THE BUILDING TRADE

ESSAYS ON BUILDING PRACTICE—IV

By J. R. TAYLOR.

THE 1909 AGREEMENT AND ITS IMPLICATIONS.

At the time of writing, the draught of the new form of agreement and conditions of contract for building works, on which it is understood negotiations are now nearing completion, is not available. But if it were available it would be some considerable time before any really useful criticism could be advanced, because, so peculiar are the ordinary contractural relationships between the owner, his architect and his builder—peculiar, that is to say, in comparison with almost any other ordinary commercial undertaking—that it is only in the light of prolonged experience that any instrument defining and regulating this relationship can be judged.

But though it is to be hoped that the new "conditions of contract" will find speedier general acceptance than have some predecessors, it is not by any means a waste of time to endeavour to secure for them a fairer trial than that which the Agreement and Schedule of Conditions of 1903 has sometimes met with. The fact that this Agreement and Schedule is likely to be so soon superseded makes it easier to write freely on its merits and demerits.

The architect has won for himself (corporately) a position of almost unexampled trust, and these conditions of contract recognise this in full measure. But the position won requires to be maintained by doing the most scrupulous justice, and, as I quoted previously, "not only must justice be done, but it must appear to be done." Justice and the appearance of justice are not, however, of themselves sufficient. Human nature being what it is, autocratic government cannot be for ever maintained if founded solely on justice backed by power; the base requires to be widened by insight and understanding, and reinforced by generosity. All these and many other things have characterised many of the most eminent and successful architects, and have thereby done much to make secure the position and esteem in which the architectural profession is held to-day. It is in this spirit, and without any desire to "score off" anybody, that I venture a few criticisms, not only of the conditions themselves, but of their implications and with regard to the evasions of these implications that occasionally crop up in practice. The conditions I am considering are those in the official form (R.I.B.A., 1909).

Clause 1.—In clause 1 the contractor is called upon to give notice to the architect in writing that any supplementary or detail drawing contains or involves an extra. In my opinion this is wrong in principle, because the whole spirit of the contract is that the architect is better equipped than the contractor, and is therefore better able to exercise a correct judgment. The man who, above all others, is able to say whether a certain work falls within or without the particulars of quantities is the quantity surveyor. This is one more reason why it is better that the architect should not take off his own quantities. Either the architect or his chief draughtsman should make sure that all detail drawings are within the quantities, and if there is room for the least doubt, the detail, before going forward to the builder, should be submitted to the surveyor for verification. If, in the opinion of the surveyor, a claim arises as to either an addition or a deduction, the detail should, if it remain unmodified, be accompanied to the builder by the necessary variation order. This variation order should if possible, be "monied out" and be in duplicate, so that the builder could be required to agree and return a signed copy or protest if necessary.

Some surveyors, when dealing with this clause, load it with a provision that if the builder fails to claim an extra at this point, any subsequent claim will not be considered. This (quite unintentionally, I believe) is very unfair. As professional men, the architect and surveyor are presumably better fitted to carry the responsibility of keeping the ring than the builder, and the onus should rest with them. Any attempt to shift the burden of responsibility to weaker shoulders merely lowers their prestige in most cases. Quite apart from the ethics of the matter, it is an expedient of doubtful value, because clause 12 gives a signed detail the weight of a written order.

Clause 2.—This clause deals with drawings and details in a manner more fitted to earlier times, when building proceeded in a leisurely manner, than to-day. It states that one copy of the drawings and specifications shall be furnished free of cost to the contractor for his own use, and that they shall be kept on the work. The works here means the site. One copy of the drawings was always an inadequate provision for the proper and economical conduct of building operations, even when the builder's works and the job were close together. But in these speedy days, any attempt to carry on with less than three copies, if the job is of any magnitude, is merely suicidal. A copy is wanted in the office for ordering materials; another in the joiner's shop, in order to comply with the specification as to the early framing up of joinery; and a third for the site. These are the minimum requirements for well-conducted works. Some architects recognise this, and supply an additional free copy. But, generally, the first business of the builder's office on securing a contract is to rush out tracings. When I write "rush," I must not be taken too literally, because a builder's draughtsman is not generally a speedman when it comes to tracing, and it is a job that he heartily dislikes. But he puts his best efforts into it, and the very necessity for speed usually results in mistakes which, if not discovered in time, may have very serious consequences. If some architects, who delight in printing half the specification in small character on to their drawings, could hear what this poor fellow says about them, they would no longer twit him with obscurity—at all events of language.

Some architects, if asked, will provide additional copies on payment of fees, but not all; where they do they often have widely varying views as to the proper charges to be made. In the long run I cannot doubt that it would be of advantage to all parties if the surveyor dealt with this matter by including the service in the provisional sums.

In this connection I wish to register an emphatic protest against a growing practice in some districts of issuing "blue prints." Even at half-inch scale they are not a good vehicle because they do not take colour well and therefore do not convey the idea as vividly as black and white. At a scale of 8 ft. to an inch they are intolerable for works dealing with composite materials and result in loss of time and temper and in many other mistakes.

This clause also deals with the issue of details on notice given. Notice to the architect as to details should be entirely unnecessary. In view of the requirements of the specification concerning the seasoning of joinery all the joiner's details should be issued immediately the contract is signed. A job having stonework dressings is invariably longer in execution than where stonework is absent, and a wise builder orders it at the earliest possible moment. Reconstructed stone costs less and wears better if given ample time in making and seasoning. Terra-cotta must have time to allow of proper economy in connection with the moulds. All goods to special manufacture should be ordered early so as to leave a margin for replacement of breakages, should they occur. This is, or should be, better known to the architect than anybody, but I have known jobs to come to a standstill for want of details—requested at three months' notice in some cases. In this connection the builder is well advised to put all his requests for details into writing and to keep a careful record of the dates on which they are received. With the architect in one town and the builder in another, constant correspondence is compulsory; where they both conduct business in the same town it is advisable.

Clause 3.—This clause deals with the deposit of priced quantities and states that they should be furnished to the architect for his use and for the use of the surveyor. Many builders consider that these should be sealed up and only opened when the builder is present and resealed as soon as the necessary information for the immediate purpose has been obtained. Other builders do not go as far as this, but prefer that the copy should remain in charge of the surveyor. It is a nice point, and has been argued many times. It is, of course, necessary that quantities should be checked, and if the builder makes a point of it inconvenience is but seldom occasioned by sealing. Called on fairly frequently to attend the opening for the purpose of pricing variation orders, as suggested in my notes on Clause 1, the builder would relax unless he has stronger than sentimental reasons for his vigilance.

I have noted stipulations by quantity surveyors lately that the bills shall be returned by the builder at the end of the job. This should be resisted because no fair-minded man can have any doubt at all that if any bills should be returned it is the priced copies deposited by the builder. They are in the nature of a trust, which should not be abused. Even the blank copies supplied for use on the job should remain the property of the builder and be regarded as strictly private as well, so that they can be used for making notes in connection with the making-up of final accounts. The threatened encroachment is likely to do much harm to the relationship between builder and surveyor.

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Woolwich. — HOUSING SCHEME. — The Commissioners of Crown Lands have agreed to sell to the Woolwich Council a new housing site situate on the south side of Eltham-road and Eltham-hill, adjacent to the present housing estate, consisting of approximately 275 acres, upon which 2,200 houses can be erected of an average density, including open spaces, of eight to the acre. The Council have appointed Mr. John Sutcliffe, A.M.I.C.E., the borough engineer, as architect for the whole scheme. No contracts for the housing have yet been let.

LAW REPORT

King's Bench Division. Before JUSTICES SWIFT and MACNAGHTEN.

Damp New House.

Cannon Hill Estates, Ltd., builders and contractors, appealed in the King's Bench Division on January 20 from a verdict and judgment at the City of London Court, awarding Mr. William Harold Miller £91 damages in respect of a house built by the firm and sold to him. (*The Builder*, May 16, 1930.)

Mr. Moresby, for the appellants, said that during the abnormally wet weather of 1929 the house became damp. Counsel contended that there was no contract, express or implied, that the house would be fit for habitation.

Mr. Justice Swift said that if one bought an unfurnished house there was no implied contract that it would necessarily be fit for habitation. When, however, one contracted with builders or developers of estates that they should build a house there was an implication of law that it should be reasonably fit for the purpose for which it was intended—a human dwelling. There was an implied agreement that the house should be completed in an efficient manner, and that proper materials should be used.

Mr. Justice Macnaghten concurred and the appeal was dismissed with costs.

Leave for further appeal was refused.

RELIGIOUS INFLUENCES ON ARCHITECTURE.

SIR BANISTER FLETCHER, P.R.I.B.A., in his second lecture on English Mediæval Architecture at the Central School of Arts and Crafts on Wednesday, traced the development of the planning of churches and cathedrals. The plans of cathedrals, he said, were elaborated by reason of ritual exigencies, such as the necessity of providing pilgrims' paths to holy relics in shrines, like that of Thomas à Becket in Canterbury Cathedral and Edward the Confessor in Westminster Abbey. Veneration of the Blessed Virgin required Lady Chapels, and masses for the dead led to the endowment of chantry chapels by noble families where departed members were perpetually honoured. Thus the Gothic period of the thirteenth, fourteenth and fifteenth centuries was marked, in spite of unsettled conditions, by religious enthusiasm shown in the zeal of Crusaders or the patient tramp of pilgrims.

The lecturer also dealt with the scientific evolution of vaulting, which began with the Roman solid barrel and cross vaults and developed into the rib and panel type of Gothic architecture. The ribs gradually increased for the support of the intervening panel and culminated in the fan and pendant vaults of the fifteenth century. The vaults caused downward and outward pressures, the latter of which had to be counteracted by buttresses and flying buttresses weighted by pinnacles.

THE BUILDING TRADE

ESSAYS ON BUILDING PRACTICE—IV

By J. R. TAYLOR.

THE 1909 AGREEMENT AND ITS IMPLICATIONS.

At the time of writing, the draught of the new form of agreement and conditions of contract for building works, on which it is understood negotiations are now nearing completion, is not available. But if it were available it would be some considerable time before any really useful criticism could be advanced, because, so peculiar are the ordinary contractural relationships between the owner, his architect and his builder—peculiar, that is to say, in comparison with almost any other ordinary commercial undertaking—that it is only in the light of prolonged experience that any instrument defining and regulating this relationship can be judged.

But though it is to be hoped that the new "conditions of contract" will find speedier general acceptance than have some predecessors, it is not by any means a waste of time to endeavour to secure for them a fairer trial than that which the Agreement and Schedule of Conditions of 1903 has sometimes met with. The fact that this Agreement and Schedule is likely to be so soon superseded makes it easier to write freely on its merits and demerits.

The architect has won for himself (corporately) a position of almost unexampled trust, and these conditions of contract recognise this in full measure. But the position won requires to be maintained by doing the most scrupulous justice, and, as I quoted previously, "not only must justice be done, but it must appear to be done." Justice and the appearance of justice are not, however, of themselves sufficient. Human nature being what it is, autocratic government cannot be for ever maintained if founded solely on justice backed by power; the base requires to be widened by insight and understanding, and reinforced by generosity. All these and many other things have characterised many of the most eminent and successful architects, and have thereby done much to make secure the position and esteem in which the architectural profession is held to-day. It is in this spirit, and without any desire to "score off" anybody, that I venture a few criticisms, not only of the conditions themselves, but of their implications and with regard to the evasions of these implications that occasionally crop up in practice. The conditions I am considering are those in the official form (R.I.B.A., 1909).

Clause 1.—In clause 1 the contractor is called upon to give notice to the architect in writing that any supplementary or detail drawing contains or involves an extra. In my opinion this is wrong in principle, because the whole spirit of the contract is that the architect is better equipped than the contractor, and is therefore better able to exercise a correct judgment. The man who, above all others, is able to say whether a certain work falls within or without the particulars of quantities is the quantity surveyor. This is one more reason why it is better that the architect should not take off his own quantities. Either the architect or his chief draughtsman should make sure that all detail drawings are within the quantities, and if there is room for the least doubt, the detail, before going forward to the builder, should be submitted to the surveyor for verification. If, in the opinion of the surveyor, a claim arises as to either an addition or a deduction, the detail should, if it remain unmodified, be accompanied to the builder by the necessary variation order. This variation order should if possible, be "monied out" and be in duplicate, so that the builder could be required to agree and return a signed copy or protest if necessary.

Some surveyors, when dealing with this clause, load it with a provision that if the builder fails to claim an extra at this point, any subsequent claim will not be considered. This (quite unintentionally, I believe) is very unfair. As professional men, the architect and surveyor are presumably better fitted to carry the responsibility of keeping the ring than the builder, and the onus should rest with them. Any attempt to shift the burden of responsibility to weaker shoulders merely lowers their prestige in most cases. Quite apart from the ethics of the matter, it is an expedient of doubtful value, because clause 12 gives a signed detail the weight of a written order.

Clause 2.—This clause deals with drawings and details in a manner more fitted to earlier times, when building proceeded in a leisurely manner, than to-day. It states that one copy of the drawings and specifications shall be furnished free of cost to the contractor for his own use, and that they shall be kept on the work. The works here means the site. One copy of the drawings was always an inadequate provision for the proper and economical conduct of building operations, even when the builder's works and the job were close together. But in these speedy days, any attempt to carry on with less than three copies, if the job is of any magnitude, is merely suicidal. A copy is wanted in the office for ordering materials; another in the joiner's shop, in order to comply with the specification as to the early framing up of joinery; and a third for the site. These are the minimum requirements for well-conducted works. Some architects recognise this, and supply an additional free copy. But, generally, the first business of the builder's office on securing a contract is to rush out tracings. When I write "rush," I must not be taken too literally, because a builder's draughtsman is not generally a speedman when it comes to tracing, and it is a job that he heartily dislikes. But he puts his best efforts into it, and the very necessity for speed usually results in mistakes which, if not discovered in time, may have very serious consequences. If some architects, who delight in printing half the specification in small character on to their drawings, could hear what this poor fellow says about them, they would no longer twit him with obscurity—at all events of language.

Some architects, if asked, will provide additional copies on payment of fees, but not all; where they do they often have widely varying views as to the proper charges to be made. In the long run I cannot doubt that it would be of advantage to all parties if the surveyor dealt with this matter by including the service in the provisional sums.

In this connection I wish to register an emphatic protest against a growing practice in some districts of issuing "blue prints." Even at half-inch scale they are not a good vehicle because they do not take colour well and therefore do not convey the idea as vividly as black and white. At a scale of 8 ft. to an inch they are intolerable for works dealing with composite materials and result in loss of time and temper and in many other mistakes.

This clause also deals with the issue of details on notice given. Notice to the architect as to details should be entirely unnecessary. In view of the requirements of the specification concerning the seasoning of joinery all the joiner's details should be issued immediately the contract is signed. A job having stonework dressings is invariably longer in execution than where stonework is absent, and a wise builder orders it at the earliest possible moment. Reconstructed stone costs less and wears better if given ample time in making and seasoning. Terra-cotta must have time to allow of proper economy in connection with the moulds. All goods to special manufacture should be ordered early so as to leave a margin for replacement of breakages, should they occur. This is, or should be, better known to the architect than anybody, but I have known jobs to come to a standstill for want of details—requested at three months' notice in some cases. In this connection the builder is well advised to put all his requests for details into writing and to keep a careful record of the dates on which they are received. With the architect in one town and the builder in another, constant correspondence is compulsory; where they both conduct business in the same town it is advisable.

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Stepney.—PUBLIC-HOUSE.—The City Council have transferred the licence of the "Salmon and Ball" and "Job's Castle" public-houses to a house and premises to be erected on a site at Spital-square and Church-passage.

Tottenham. — CHAPELS. — The Tottenham Wesleyan Circuit has a new chapel scheme for White Hart-lane, costing £7,141, and at Ponders End, in the same circuit, a new chapel is to be built at a cost of £9,531.

Woolwich. — HOUSING SCHEME. — The Commissioners of Crown Lands have agreed to sell to the Woolwich Council a new housing site situate on the south side of Eltham-road and Eltham-hill, adjacent to the present housing estate, consisting of approximately 275 acres, upon which 2,200 houses can be erected of an average density, including open spaces, of eight to the acre. The Council have appointed Mr. John Sutcliffe, A.M.I.C.E., the borough engineer, as architect for the whole scheme. No contracts for the housing have yet been let.

LAW REPORT

King's Bench Division. Before JUSTICES SWIFT and MACNAGHTEN.

Damp New House.

Cannon Hill Estates, Ltd., builders and contractors, appealed in the King's Bench Division on January 20 from a verdict and judgment at the City of London Court, awarding Mr. William Harold Miller £91 damages in respect of a house built by the firm and sold to him. (*The Builder*, May 16, 1930.)

Mr. Moresby, for the appellants, said that during the abnormally wet weather of 1929 the house became damp. Counsel contended that there was no contract, express or implied, that the house would be fit for habitation.

Mr. Justice Swift said that if one bought an unfurnished house there was no implied contract that it would necessarily be fit for habitation. When, however, one contracted with builders or developers of estates that they should build a house there was an implication of law that it should be reasonably fit for the purpose for which it was intended—a human dwelling. There was an implied agreement that the house should be completed in an efficient manner, and that proper materials should be used.

Mr. Justice Macnaghten concurred and the appeal was dismissed with costs.

Leave for further appeal was refused.

RELIGIOUS INFLUENCES ON ARCHITECTURE.

SIR BANISTER FLETCHER, P.R.I.B.A., in his second lecture on English Mediæval Architecture at the Central School of Arts and Crafts on Wednesday, traced the development of the planning of churches and cathedrals. The plans of cathedrals, he said, were elaborated by reason of ritual exigencies, such as the necessity of providing pilgrims' paths to holy relics in shrines, like that of Thomas à Becket in Canterbury Cathedral and Edward the Confessor in Westminster Abbey. Veneration of the Blessed Virgin required Lady Chapels, and masses for the dead led to the endowment of chantry chapels by noble families where departed members were perpetually honoured. Thus the Gothic period of the thirteenth, fourteenth and fifteenth centuries was marked, in spite of unsettled conditions, by religious enthusiasm shown in the zeal of Crusaders or the patient tramp of pilgrims.

The lecturer also dealt with the scientific evolution of vaulting, which began with the Roman solid barrel and cross vaults and developed into the rib and panel type of Gothic architecture. The ribs gradually increased for the support of the intervening panel and culminated in the fan and pendant vaults of the fifteenth century. The vaults caused downward and outward pressures, the latter of which had to be counteracted by buttresses and flying buttresses weighted by pinnacles.

RATES OF WAGES IN THE BUILDING TRADE

[Every endeavour is made to ensure accuracy, but we cannot be responsible for errors.]

	Masons.	Bricklayers.	Carpenters Joiners.	Plasterers.	Slaters.	Plumbers.	Painters.	Labourers.
Aberdare	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Accrington	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Aldershot	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Alfreton	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Alnwick	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Altrincham	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Ashford (Kent)	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Ashington	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Ashton-under-Lyne	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Aylsham	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Banbury	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Barnsley	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Barnstaple	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Barrow-in-Furness	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Barry	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Basingstoke	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Bath	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Bedford	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Berwick	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Bexhill	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Birkenhead	1/8½	1/8½	1/8½	1/9½	1/8½	1/8½	1/8½	1/3½
Birmingham	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Bishop Auckland	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Blackburn	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Blackpool	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Bognor Regis	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Bolton	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Bournemouth	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Bradford	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Bradford-on-Avon	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Braintree	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Brentwood	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Bridgwater	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Bridlington	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Brighton	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Bristol	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Bromsgrove	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Bromyard	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Bungay	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	11
Burnley	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Burton-on-Trent	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Bury	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Buxton	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Cambridge	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Canterbury	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Cardiff	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Carlisle	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Chatham	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Chelmsford	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Cheltenham	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Chester	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Chesterfield	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Chorley	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Cirencester	1/4	1/4	1/4	1/4	1/4	1/3	1/3	1/0
Clacton	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Colchester	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Coventry	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Cranbrook	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	11
Crewe	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Cromer	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Darlington	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Deal	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Denbigh	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Derby	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Devizes	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/2½	11½
Dewsbury	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Doncaster	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Dorchester	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/2½	11½
Dorking	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Dovercourt	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Driffield	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Droitwich	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Dudley	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Durham	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Eastbourne	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
E.Glam. (Mon. Val.)	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Ely	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Exeter	1/6	1/6	1/6	1/6	1/6	1/6	1/5	1/1½
Exmouth	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Fakenham	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Felixstowe	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Folkestone	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Frome	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/2½	11½
Glossop	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Gloucester	1/6	1/6	1/6	1/6	1/6	1/6	1/5	1/1½
Godalming	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Goole	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Gosport	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Grantham	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Great Yarmouth	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Grimsby	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Guildford	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Halifax	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Harpenden	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Harrogate	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Hartlepools	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Harwich	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Hastings	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Hatfield	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Hednesford	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Hereford	1/5	1/5	1/5	1/5	1/5	1/5	1/4	1/0½
Herne Bay	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Hertford	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Hitchin	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Hoddesdon	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Holt	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	11
Huddersfield	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Hull	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Hunstanton	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Huntingdon	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Isle of Wight	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Ipswich	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Keighley	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Kettering	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Kidderminster	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
King's Lynn	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Lancaster	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½

	Masons.	Bricklayers.	Carpenters Joiners.	Plasterers.	Slaters.	Plumbers.	Painters.	Labourers.
Leamington Spa	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Leeds	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Leicester	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Leighton Buzzard	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Lichfield	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Lincoln	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Littlehampton	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Liverpool	1/8½	1/8½	1/8½	1/9½	1/8½	1/8½	1/8½	1/3½
Llandudno	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Llanelly	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
London:								
12 m. radius	1/8½	1/8½	1/8½	1/8½*	1/8½	1/8½	1/7½	1/2½
12-15 m. radius	1/8	1/8	1/8	1/8*	1/8	1/8	1/7	1/2
Loughborough	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Lowestoft	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Luton	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Macclesfield	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Maidstone	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Malvern	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Manchester	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Mansfield	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Margate	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Market Harb'rough	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Matlock	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Melton Constable	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	11
Melton Mowbray	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Merthyr Tydfil	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Middlesbrough	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Newark	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Newbury	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Newcastle-on-Tyne	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Newcastle-ur-Lyme	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
New Forest	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Newmarket	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Newport, Mon.	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Northampton	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Norwich	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Nottingham	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Nuneaton	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Oakham	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Oldham	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Oxford	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Paignton	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Peterborough	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Plymouth	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Pontypridd	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Portsmouth	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Preston	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Ramsgate	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Reading	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Redcar	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Redditch	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Reigate	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Retford	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Ripon	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Rochdale	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Rochester	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Rugby	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Saffron Walden	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
St. Albans	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
St. Helens	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Sawbridgeworth	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Saxmundham	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Scarborough	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Sevenoaks	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Sheffield	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Shrewsbury	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Sittingbourne	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Southampton	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Southend-on-Sea	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Southport	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
South Shields	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Stevenage	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Stockport	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Stockton-on-Tees	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Stoke-on-Trent	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Stourbridge	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Stourport	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Stowmarket	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Stratford-on-Avon	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Stroud	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Sunderland	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Swaffham	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	11
Swansea	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Swindon	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Tamworth	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Taunton	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Thetford	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Torquay	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Totnes	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Trowbridge	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Tunbridge Wells	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Uttoxeter	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Wakefield	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Walsall	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Walsden	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Warminster	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Warrington	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Warwick	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/2½
Wells (Norfolk)	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	11
Welwyn Gar. City	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/2
West Bromwich	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Weston-sup-Mare	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Weymouth	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Whitby	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Wigan	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Winchester	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Windsor	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Wisbech	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Wolverhampton	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Woodbridge	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Worcester	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Worksop	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Worthing	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Wrexham	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/1½
Wycombe	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Wymondham	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
York	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½

* The rate recognised by the National Association of Plasterers, Granolithic and Cement Workers, is 1/11½ per hour.

For Building Trade wages in Scotland, see page 212.

CONTRACTS, COMPETITIONS, &c.

For some contracts still open, but not included in this List, see previous issues. Those with an asterisk are advertised in this number. Certain conditions beyond those given in the following information are imposed in some cases, such as that advertisers do not bind themselves to accept the lowest or any tender; that a fair wages clause shall be observed, that no allowance will be made for tenders; and that deposits are returned on receipt of a bona-fide tender unless stated to the contrary.

The date given is the latest date when the tender, or the names of those willing to submit tenders, may be sent in, the name and address at the end is the person from whom or place where quantities, forms of tender, etc., may be obtained.

Following is a list of abbreviations:—Borough Surveyor, B.S.; Borough Engineer, B.E.; District Surveyor D.S.; Clerk, C.; Town Clerk T.C.; County Engineer, C.E.; County Surveyor, C.S.; Surveyor, S.; Engineer, E.

BUILDING, PAINTING, ELECTRIC LIGHTING, HEATING, etc.

JANUARY 26.

Belfast.—Alterations.—And additions to Malone Training School, Belfast, for Government of Northern Ireland. R. E. Thornley, Assistant Secretary, Ministry of Finance, Belfast. Dep. £1.

Dunfermline.—Houses.—82 at Baldridgeburn, for T.C. D. H. Shaw, B.E. Dep. £1 1s.

Finchley, N.3.—Public Convenience.—For U.D.C. Acting Clerk, Council Offices. Dep. £1.

Hornsey.—Repairs, etc.—External painting and repairs to Andover Children's Home, Andover-row, Hornsey, N.7. The Chief Engineer, Old County Hall Spring-gardens, S.W.1. Dep. £1.

Hull.—Cleaning.—And painting at the central police station, police fire boxes, etc., for T.C. D. Harvey, A.R.I.B.A., City Architect, Guildhall, Hull.

Liverpool.—Pavilion.—Bowls pavilion and conveniences at Springwood gardens and recreation ground, Woolton-rd., Allerton, for Corporation. Land Steward and Surveyor.

London.—Repairs, etc.—Repairs and spraying of road at St. Nicholas Hospital and Woolwich Institution, Plumstead High-st., S.E.18; Lamorbey Residential School, Sidcup, Kent; Shirley Residential School, Wickham-rd., Shirley, Croydon, for L.C.C. Chief Engineer, The Old County Hall, Spring-gardens, S.W.1. Dep. £1.

Oswestry.—Houses.—Town Clerk, Guildhall. Dep. £1 1s.

Tottenham, N.15.—Alterations and Additions.—At Stamford-hill school, for the Tottenham E.C. Clerk, Education Offices, Philip-lane, S. Tottenham. Dep. £2.

JANUARY 27.

Ardsley East and West.—Houses.—12 non-parlour on Westerton-rd. housing estate, for U.D.C. S. Dep. £2 2s.

Heckmondwike.—Lighting, etc.—(1) Low-pressure hot-water heating apparatus, and (2) electric light at the Heckmondwike grammar school, for the County Council of the West Riding of Yorkshire. Education Officer, County Hall, Wakefield.

Hemsworth.—Hot Water.—For installing a low-pressure hot-water heating installation at the Hemsworth secondary school, for the County Council of the West Riding of Yorkshire. Education Officer, County Hall, Wakefield.

Horsham.—School.—Erection of a new infants' school, East Parade, Horsham, Sussex, for West Sussex C.C. Haydn P. Roberts, F.R.I.B.A., County Architect, North-st., Chichester. Dep. £1 1s.

Kelty.—Houses.—Eighty, for Fife C.C. H. F. Hodge, Commercial Bank-bldgs., High-st., Dunfermline.

Kent.—Cottages.—Erection of, in the following parishes:—Beneden, Frittenden, Hawkhurst, Kilndown and Sandhurst, for Cranbrook R.D.C. Clerk. Dep. £1 1s.

Maldon.—Shed.—Small engine shed and other works at Tolleshunt Knights waterworks, for R.D.C. William Almond, E., 6, Market-hill.

Maldon.—Dwellings.—Four pairs, Cripplegate, Southminster; four pairs, Mell-rd., Tollesbury; three pairs, Langford; two pairs, Pump-corner, Purleigh, for R.D.C. Wm. Almond, 6, Market-hill.

Rugby.—Cubicles.—For additional cubicles at the Avon Mill open air pool, for U.D.C. W. H. Spicer, M.I.M.Cy.E., E. and S., Benn-bldgs., Rugby.

Sowerby Bridge.—Painting.—Internal and external painting work at Sowerby Bridge Allan House Child Welfare Centre, for the County Council of the West Riding of Yorkshire. Education Officer, County Hall, Wakefield.

JANUARY 28.

Beckenham.—New School.—Clerk, Council Offices. Dep. £5 5s.

***Carlton Colville, near Lowestoft.**—New School.—For the East Suffolk C.C. County Architect, County Hall, Ipswich. Dep. £2 2s.

Edinburgh.—Alterations.—To property at the corner of Clermiston-rd. and St. John's-rd., Corstorphine, for T.C. Burgh Engineer, 329, High-st.

Freebridge Lynn.—Housing.—Three pairs of cottages (non-parlour type) in the parish of Middleton, for R.D.C. Council's Sanitary Officer, A. W. Plowright, Gayton. Dep. £1 1s.

Lumphinnans.—Houses.—8 houses at Lumphinnans, near Miners' Welfare Institute; 8 houses at Brucefield, for Fife C.C. W. Williamson, F.R.I.B.A., architect, Kirkcaldy. Dep. £1 1s.

Uxbridge.—Installation.—Of accelerated low-pressure hot water heating at Post Office, etc., for H.M.O.W. Contracts Branch, King Charles-st., S.W.1. Dep. £1 1s.

Whittlesey.—Houses.—12, at Coates, for U.D.C. F. W. English, clerk. Dep. £1 1s.

JANUARY 29.

Bredbury and Romiley.—Houses.—22 parlour-type in pairs on Cherry Tree estate, Compstall-rd., Romiley, for U.D.C. Wm. A. Banks, architect, 76, Wellington-rd. South, Stockport. Dep. £2 2s.

Dublin.—Installation.—Of central heating and ventilating equipments at offices in Bargh Quay, for Irish Press, Ltd. J. F. Crowley & Partners, engineers, Westminster House, Great George-st., Westminster, S.W.1. Dep. £2 2s.

East Lothian.—Extension.—To County buildings at Haddington, for C.C. Dick Peddie & Walker Todd, 8, Albyn-place, Edinburgh. Dep. £2 2s.

Glasgow.—Houses.—Sixty, on Polmadie housing scheme, for T.C. D. Stenhouse, Town Clerk, City-chams.

Lutterworth.—Houses.—Six non-parlour type in Bell-st., Claybrooke Magna, for R.D.C. S., 2, The Terrace. Dep. £1.

Macclesfield.—Erection.—Of new employment exchange, for H.M.O.W. Contracts Branch, H.M.O.W., King Charles-st., S.W.1. Dep. £1 1s

Manchester.—Conversion.—Of stable into conveniences, etc., at Water-st. cleansing depot, for T.C. City Architect, Town Hall. Dep. £1 1s.

Yeovil.—Post Office.—Erection of, for H.M.O.W. Contracts Branch, King Charles-st., London, S.W.1. Dep. £1 1s.

JANUARY 30.

Dunfermline.—Stance.—Erection of retaining wall and concrete construction works in connection with formation of omnibus stance at St. Margaret's-st., Dunfermline, for T.C. David H. Shaw, Burgh Engineer, City-chams., Dunfermline. Dep. £1 1s.

JANUARY 31.

Bingham.—Houses.—Radcliffe-on-Trent, Bingham-rd. site, 12; Radcliffe-on-Trent, Sydney-grove site, 6; Keyworth, 10, for R.D.C. C. W. Kendrick, Housing Surveyor, Bingham, Notts. Dep. £3.

Enfield.—Open-air Swimming-bath.—(*a*) The construction of bath and works other than buildings; (*b*) the construction of buildings. Kenneth Tansley, Clerk to the Council, Public Offices, Enfield, Middlesex.

Lostwithiel.—School.—Additions to, for Cornwall Education Committee. County Architect, County Hall, Truro. Dep. £1 1s.

Methley.—Housing.—Twelve scullery type houses, to be built in blocks of two on the Summerhill-rd. site, Mickletown, Methley, for U.D.C. James Belford, surveyor, Red House, Methley, near Leeds. Dep. £1 1s.

Mutford and Lothingland.—Housing Scheme.—Four houses in New-rd., Fritton, for R.D.C. Councils' Surveyor, Mr. H. Blewitt, Council Offices, Beecles-rd., Oulton Broad. Dep. £1 1s.

Portsoy.—Housing Scheme.—Sixteen dwelling-houses proposed to be erected at Old Cullen-rd., for T.C. Donald M'Alpine, The Lodge, Cullen.

Rossington.—Police Station.—At Rossington, for Police Authority of the West Riding of Yorkshire. West Riding Architect, County Hall, Wakefield.

Smethwick.—Heating.—Low-pressure hot-water heating of Holly Lodge high school for boys (accommodation 600), for E.C. S. Childs, Director of Education, 215, High-st. Dep. £3 3s.

FEBRUARY 2.

Askern.—Works.—Construction of a recreation ground at Askern, a boat house and landing stage, footpaths, walks, shrubberies, flower beds, etc., for P.C. J. Simmons & Son, civil engineers, 20, Silver-st., Doncaster. Dep. £3.

***Becontree and Dagenham.**—Pram Shelters.—At Becontree and Dagenham clinics, for the Dagenham U.D.C. Clerk, Council Offices, Becontree-av., Chadwell Heath. Dep. £1 1s.

Bridlington.—Installation.—Electrical installation of new municipal offices in Quay-rd., for T.C. B.E. Dep. £2 2s.

Bury.—Flats.—Erection of, 200 flats, for the Corporation. Town Clerk, Municipal Offices, Bank-st. Dep. £5.

Dublin.—Additions.—Alterations and additions to Charlemont House, Parnell-sq., for T.C. City Architect, Exchange-bldgs., Lord Edward-st. Dep. £5 5s.

***Fifield, Berks.**—Houses.—For the Cookham R.D.C. Clerk, 1, Park-st., Maidenhead. Dep. £1 1s.

London, W.—Flats.—For T.C. Town Clerk, Municipal Offices, Acton, W.3. Dep. £2.

Seaford.—Hard Tennis Courts.—Relaying of three on "The Salts" recreation ground, for U.D.C. Surveyor to the Council, Council Offices, Seaford.

Seaford.—Seating.—Of Council offices, for U.D.C. Surveyor to the Council, Council Offices, Broad-st., Seaford.

Seaford.—Buildings.—On "The Salts" recreation ground: (1) Proposed cafe, (2) two public shelters, (3) one shelter to public tennis courts, for U.D.C. Surveyor to the Council, Council Offices, Seaford.

Shepperton.—Houses.—For U.D.C. Clerk, Council Offices, Sunbury-on-Thames. Dep. £2 2s.

Southampton.—Walls.—Reinforced concrete retaining walls, parapet walls, and a roadway of asphalt on concrete foundation, forming approaches to Bitterne No. 3 Bridge, for C.B. B.E., 33-35, French-st. Dep. £3 3s.

Southmolton.—Houses.—Six, and for laying of approximately 160 yds. of cast-iron water main and 245 yds. of steel gas main in Parsonage-lane, for T.C. E. Turnbull. Dep. £2 2s.

Tendring.—Cottages.—6, Bradfield; 6, Kirby-le-Soken; 10, Lawford; 10, Thorpe-le-Soken, for R.D.C. F. G. Vincent Brown, architect, Dovercourt Bay.

FEBRUARY 3.

Barnet.—Houses.—Erection and drainage, etc., of 44 houses on the Willhouse estate, for U.D.C. Clerk, Old Court House, Wood-st. Dep. £2 2s.

***Chelmsford.**—Garage.—For the Essex C.C. County Architect, Springfield Old Court. Dep. £1 1s.

***Chingford, Essex.**—Houses.—For the U.D.C. Clerk, Town Hall, The Ridgeway. Dep. £2 2s.

Darlington.—Alterations.—To the Head Post Office, Darlington. Contracts Branch, H.M.O.W., King Charles-st., S.W.1. Dep. £1 1s.

Ealing.—Erection.—Of handicraft and science rooms at Little Ealing School. Geo. E. Brydges, Town Clerk, Town Hall, Ealing, W.5. Dep. £2 2s.

Redhill.—Demolition, etc.—Deomilition work and erection of a new post office at Redhill. Contracts Branch, H.M.O.W., King Charles-st., S.W.1. Dep. £1 1s.

Staffordshire.—Installations.—Of electric light in Brownhills Ogley Hay senior girls' new Council school to accommodate 360 children; Brownhills Walsall Wood senior mixed Council school: new assembly hall, science room, staff room, cloak rooms, etc.; Burntwood Chase Terrace senior boys' and senior girls' new Council schools, each to accommodate 400 children; Short Heath senior mixed new Council school to accommodate 400 children; Wednesfield junior mixed new Council school to accommodate 350 children, for E.C. Moffett, Rosher & Mann, consulting engineers, Union-chams., Temple-row, Birmingham. Dep. £4 4s.

Yeovil.—Houses.—Three non-parlour type houses at Park-st. H. C. C. Batten, Town Clerk, Municipal Offices. Dep. £1 1s.

FEBRUARY 4.

Bridlington.—Houses.—Two, at Postill estate, for T.C. B.E. and S., 23, Cliff-st., Bridlington.

Liverpool.—Housing.—For 12 new dwellings, Calvin-st. and Burnet-st., for T.C. Director of Housing, Municipal Buildings, Dale-st. Dep. £2 2s.

London, S.E.—Houses.—Erection of 36 houses, for the Greenwich B.C. Town Clerk, Town Hall, Greenwich, S.E.10. Dep. £2 2s.

***Long Ditton, Esher, and Claygate.**—Cottages and Flats.—For the Esher U.D.C. Clerk, Council Offices, Esher.

FEBRUARY 5.

Burton-on-Trent.—Telephone Exchange.—Erection of a telephone exchange at Burton-on-Trent. Contracts Branch, H.M.O.W., King Charles-st., S.W.1. Dep. £1 1s.

Cleethorpes.—School.—New elementary school in Parker-st., Cleethorpes, for Lindsay C.C. Henry G. Gamble, F.R.I.B.A., County Architect, Bank-st.-chams., Lincoln. Dep. £2 2s.

Leeds.—Painting.—At the Relief Offices, 1, Green Hill-rd., Armley, Leeds, for T.C. H. Fieldhouse, Public Assistance Officer, 11, South-parade, Leeds.

Riccall.—Houses.—Non-parlour type at Barlby (4), Cliffe (4), North Duffield (4), Skipworth (4), and Kelfield (4), for R.D.C. H. Bell, S., Barlby-rd., Selby. Dep. £1 1s.

Southampton.—School.—New senior boys' school, Andoyer. Clerk of the County Council, The Castle, Winchester. Dep. £1 1s.

FEBRUARY 6.

East Lothian.—Houses.—24 3-apartment, at West Barns housing site, for C.C. County Architect, Property and Works Department, Haddington.

FEBRUARY 7.

Erpingham.—Cottages.—Four at Thornage and 2 at Northrepps, for R.D.C. Buckinham & Berry, F.S.I., F.R.I.B.A., 43a, Prince of Wales-rd., Norwich. Dep. £1 1s.

Mill Hill.—Temporary School.—For the Hendon U.D.C. Chairman, Education Committee, Town Hall, N.W.4. Dep. £4 4s.

FEBRUARY 9.

East Barnet.—School.—New County Council school at Cromer-rd., East Barnet Valley, for Hertfordshire County Council. A. Ernest Prescott, County Surveyor and Architect, County Surveyor's Office, Hatfield, Herts. Dep. £2 2s.

England.—Foundations.—Construction of site works, foundation works and buildings at Wigan and Southport, in area of North-West England and North Wales Electricity Scheme, for Central Electricity Board. R. H. Fox, secretary, Trafalgar Buildings, 1, Charing Cross, W.C.2. Dep. £2 2s.

Newcastle-upon-Tyne.—Sports Pavilion, etc.—At Exhibition Park, for City and County. City Engineer, Town Hall, Newcastle-upon-Tyne. Dep. £2 2s.

Preston.—School.—New senior school in Frenchwood-av., for C.B. W. Platt, B.E. and S., Birley-st. Dep. £2.

Seaham Harbour.—Pavilion.—Erection of a new pavilon for 50 patients and staff annexe at Seaham Hall Sanatorium, Seaham Harbour, Co. Durham, for Durham C.C. William J. Merrett, C.S., County Surveyor's Office, 43, Old Elvet, Durham.

FEBRUARY 10.

Gosforth.—Houses.—Twelve, on Kenton-rd. North housing estate, for U.D.C. George Nelson, A.M.I.C.E., Architect to the Council, Council Chambers, Gosforth. Dep. £2 2s.

***Greenwich, S.E.**—New Storey.—For H.M.O.W. Contracts Branch, King Charles-st., S.W.1. Dep. £1 1s.

***Romford.**—New Council School.—For the Essex C.C. County Architect, Springfield Old Court, Chelmsford. Dep. £2 2s.

Truro.—Housing.—Repairs to 85 various houses, for R.D.C. Coulter Hancock, Clerk to the Council, 12, Princes-st. Dep. £1 1s.

***Upminster.**—Alterations and Additions.—To Council school, for the Essex C.C. County Architect, Springfield Old Court, Chelmsford. Dep. £2 2s.

FEBRUARY 11.

***Mortlake, S.W.**—Extensions.—To sorting office, for H.M.O.W. Contracts Branch, King Charles-st., S.W.1. Dep. £1 1s.

FEBRUARY 12.

***Ashford, Middlesex.**—Post Office.—For H.M.O.W. Contracts Branch, King Charles-st., S.W.1. Dep. £1 1s.

Brighton.—Rooms.—Erection of science and housecraft rooms at Park-st. school, for C.B. Thos. Simpson & Son, architects, 16, Ship-st., Brighton. Dep. £3 3s.

Crediton.—Housing Scheme.—Block of six houses at Lapford and a block of two houses at Black Dog, for R.D.C. E. Chell, Tors View, Barnstaple Cross, Crediton.

NO DATE.

Cardiff.—Lighting.—At the extensions to the Intermediate School (Boys), Newport-rd., Cardiff, for T.C. City Electrical Engineer, The Hayes, Cardiff. Dep. £1 1s.

Ely.—Alterations.—And renovations to premises belonging to Sharman & Co., Ltd., in Market-st., Ely. Fovargue & Jakens, architects and surveyors, The Causeway, March. Dep. £2 2s.

Marionoth.—Alterations.—To the offices at Pennal Council school, for the E.C. County Architect, A. M. Howard-Jones, L.R.I.B.A., County Offices, Dolgelly.

Monaghan.—Creamery.—Erection of, at Dawson-st., for Town of Monaghan Co-operative Agricultural Dairy Society, Ltd. The Manager.

Stroud.—Stores.—For the erection of a new central stores at The Cross, Stroud, for Stroud Co-operative Society, Ltd. William Leah, architect, 10, Clarence-st., Gloucester. Dep. £3 3s.

MATERIALS, etc.

JANUARY 26.

Huntingdonshire.—Broken Granite.—For C.C. H. Leete, C.S., Huntingdon

Newbury.—Slag, etc.—For T.C. S. Widdicombe, T.C.

Willesdon.—Road Materials.—For U.D.C. F. Wilkinson, E.

JANUARY 27.

Liverpool.—Gravel.—1,000 tons of Jersey gravel at the various parks in the City of Liverpool, for T.C. Land Steward and Surveyor, Municipal-bldgs., Dale-st.

Southall-Norwood. — Highway Materials. — For U.D.C. J. B. Thomson, E. and S

JANUARY 28.

Cairo.—Asphalt.—For Egyptian Ministry of Public Works, Department of Overseas Trade, 35, Old Queen-st., S.W.1. (Ref. B.X. 6909.)

Kingston-upon-Hull.—Materials.—For T.C. City Engineer's Office.

JANUARY 29.

Kingston-upon-Hull.—Cement, etc.—For T.C. A. R. Hills, Deputy City E.

London, S.W.2.—Builder's Materials.—For Lambeth B.C. Town Clerk, Town Hall, Brixton-hill.

JANUARY 30.

Hertfordshire. — Tar, etc. — For C.C. A. E. Prescott, C.S., Hatfield.

Hertfordshire.—Broken Granite, etc.—For C.C. A. E. Prescott, C.S., Hatfield.

JANUARY 31.

Blackpool. — Highway Materials. — For C.B. Borough Treasurer.

Busks.—Broken Granite, etc.—For C.C. E. Winfield, C.S., Aylesbury.

Canterbury.—Road Materials.—For T.C. H. M. Enderby, City E. and S.

Essex.—Materials.—For Essex County Council. County Surveyor, Old-court, Chelmsford.

Gillingham.—Road Materials.—For T.C. J. L. Redfern, B.E. and S.

Selby.—Materials.—For R.D.C.—J. Townend, Clerk, Council Offices, 1, Abbey-place.

Surrey.—Materials.—For C.C. County Engineer, County Hall, Kingston-on-Thames.

Trowbridge.—Chippings.—For U.D.C. Geo. W. J. Clark, A.M.Inst.C.E., E. and S., Town Hall, Trowbridge.

Whickham.—Materials.—For making concrete roads, Dunston housing site, for U.D.C. Council's Surveyor, Thos. Fenbow, Council Offices, Whickham.

FEBRUARY 2.

Bridgwater.—Road Materials.—For T.C. R. A. Wilson, B.E. and S.

Chatham.—Road Materials.—For T.C. R. L. Honey, B.E. and S.

London, S.W.11.—Builder's Materials.—For Battersea B.C. Town Clerk, Town Hall.

London.—Road Materials, etc.—For St. Marylebone B.C. T.C.

Welwyn Garden City.—Road Materials.—For U.D.C. Capt. W. E. James, S.

West Suffolk.—Road Materials.—For C.C. E. H. Bond, C.S., Bury St. Edmunds.

FEBRUARY 3.

Cheshunt.—Materials.—For U.D.C. J. E. Sharpe, E. and S., Manor House, Cheshunt, Herts.

FEBRUARY 4.

Clacton-on-Sea.—Road Materials.—For U.D.C. W. Aiston, S.

Folkestone.—Portland Cement.—For T.C. H. O. Jones, B.E.

ENGINEERING, IRON AND STEEL

JANUARY 26.

Barton-on-Humber.—Paddling Pool, etc.—At Baysgarth Park, for U.D.C. C. G. Else, M.I.M. and Cy.E., High-st., Barton-on-Humber. Dep. £2 2s.

Kingston-upon-Hull. — Sewerage. — Cast-iron sewers, manholes, inspection chambers, together with ejector station and other incidental works, for New-st.—Paragon Station to Beverley-rd., for T.C. City E.

Ruislip-Northwood. — Sewerage. — Extension to main drainage of South Ruislip, for U.D.C. Howard Humphreys and Sons, consulting engineers, 17, Victoria-st., Westminster. Dep. £3 3s.

JANUARY 28.

Herne Bay.—Improvements.—Various retaining walls, promenades and bathing cabins in reinforced concrete, and public convenience and shelter in brick and tiles, together with all appurtenant works, at East Cliff, for U.D.C. B. J. Wormleighton, E. and S. Dep. £2 2s.

Llandudno.—Waterworks.—Construction of additional impounding works in reinforced concrete, tunnels, about 805 yds. of conduits in 21-in., 15-in. and 12-in. steel tubes, and other works, at Council's reservoirs, Talybont, Conway Valley, in parish of Caerhun, for U.D.C. W. T. Ward, Waterworks Engineer. Dep. £2 2s.

Newton Abbot.—Sewerage.—620 lin. yds. stoneware and concrete pipe sewers, ranging from 12 in. to 30 in. dia., together with manholes, etc., and opening up and rejointing 1,010 lin. yds. of existing stoneware and cast-iron pipe sewers, ranging from 6 in. to 12 in. dia., at Bovey Tracey, for R.D.C. S. Dep. £1.

Rugby.—Destructor.—Modernisation of, for U.D.C. W. H. Spicer, M.I.M.Cy.E., S., Bennbldgs., Rugby.

JANUARY 31.

Halifax.—Widening.—Of Salterhebble Bridge, for C.B. A. C. Tipple, B.E., Crossley-st., Halifax. Dep. £2 2s.

Rum.—Reconstruction.—Of bridge on Totton bypass, for Southampton C.C. W. J. Taylor, C.S., The Castle, Winchester. Dep. £2 2s.

Salop.—Widening.—Widening of Tern Bridge and approaches, situate about 5 miles east of Shrewsbury, on London-Holyhead-rd., for C.C. W. H. Butler, C.S., Shrewsbury. Dep. £5 5s.

Wantage.—Sewerage.—Laying of 382 yds. of 12 in., 219 yds. of 9 in., and 490 yds. of 6 in. stoneware and auxiliary sewers, connecting up house drains, construction of septic tanks and percolating filters, and laying out land as an irrigation area, at East Hendred, for R.D.C. John W. Harris, civil engineer, East Challow, Wantage. Dep. £2 2s.

FEBRUARY 2.

Fareham.—Sewage.—Sewage works at Salternslane and Bridgefood and Law Quay, for U.D.C. Taylor & Wallin, engineers, 1, Saville-place, Newcastle-upon-Tyne. Dep. £10.

Newcastle-upon-Tyne. — Extension. — Reinforced concrete quay, 697 ft. in length, on River Tyne, east of Ouse Burn, for T.C. City E. Dep. £3 3s.

Rowley Regis.—Reconstruction.—Of three canal bridges, for U.D.C. A. E. Brookes, M.Inst.C.E., 11, Victoria-st., Westminster, S.W.1, or Emerson-chams., Newcastle-on-Tyne. Dep. £5 5s. each contract.

South Africa.—Steelwork.—Structural steelwork and other materials for extension to wagon repair shop at Pietermaritzburg, for South African Railways and Harbours Administration. Department of Overseas Trade, 35, Old Queen-st., S.W.1. (Ref. A.X.10,666.)

FEBRUARY 4.

Ely.—Tower.—Reinforced concrete water tower at Haddenham, lining of an existing water tower with asphalt, and other subsidiary works, for R.D.C. Silcock & Simpson, engineers, 25, Victoria-st., Westminster, S.W.1. Dep. £5.

ROAD, SEWERAGE, AND WATER WORKS.

JANUARY 26.

Beckenham.—Road.—Widening portion of Upper Elmers End-rd. for length of about 1,450 lin. yds., for U.D.C. H. Storr Best. Dep. £2.

Beddington and Wallington.—Improvements.—At The Ridge, for U.D.C. S. F. R. Carter, A.M. Inst.C.E., E. and S. Dep. £1 1s.

Edinburgh.—Roads.—At Slateford-rd. housing area, for T.C. A. Grierson, S.S.C., Town Clerk, City-chams., Edinburgh.

London.—Paving.—Of Shelbury-rd., Therapia-rd., Scutari-rd., Marmora-rd., for Camberwell B.C. W. Bell, B.E. and S.

Northwick.—Sewer.—Laying 1,300 yds. of sewer, with ancillary works, and construction of river crossing, for U.D.C. W. M. Beckett, engineer, Victoria Station House, S.W.1. Dep. £1 1s.

The Maldons and Coombe.—Making-up.—Thetford-rd. West (whole of) and Thetford-rd. (part of); and Selwyn-rd. (part of), for U.D.C. S. Dep. £4 4s.

JANUARY 27.

Dover.—Making-up.—Of Hillside-rd. (approx. length 875 ft.) and Leighton-rd. (approx. length 250 ft.), for T.C. Wm. Boulton Smith, B.E. Dep. £1 1s.

Ilford.—Extension.—290 yds. lin. of 27-in. dia. sewer, 47 yds. lin. of 12-in. dia. sewer and 30 yds. lin. of 9-in. dia. sewer, together with manholes, connections and other works appurtenant thereto, in extension of existing storm-water sewer in Cranbrook-rd. and Valentines-park, for T.C. L. E. J. Reynolds, B.E. Dep. £2 2s.

Lewisham.—Paving Works.—Of Daneby-rd. (part of), Catford, for T.C. Town Hall, Catford, S.E.6 (Surveyor's Department).

Luton.—Roads.—Sewering, kerbing, channelling and foundations in construction of new roads on part of Bishopscote-rd. housing site, for T.C. J. W. Tomlinson, B.E. and S., 18, Upper George-st. Dep. £1 1s.

JANUARY 28.

Brentford and Chiswick.—Reconstruction.—In asphalt on reinforced concrete portion of carriageway in Windmill-rd., Brentford, for U.D.C. L. Willis, E. and S.

Chelmsford.—Roadwork.—Surfacing of roads, paving of footways, laying of surface-water gullies, etc., in North-av., West-av. and The Green, on Boarded Barns housing estate, for T.C. E. J. Miles, B.E. and S. Dep. £1 1s.

Glamorgan.—Roads.—Various road works, for C.C. Geo. A. Phillips, M.Inst.C.E., C.S., County Surveyor's Department, County Hall, Cardiff.

Hambledon.—Sewer.—Hundred and seventy yds. of surface water sewer at Guildford-rd., Shalford, for R.D.C. P. Williams, S. Dep. £1 1s.

Prestwich.—Widening.—Of Middleton-rd., Prestwich, for U.D.C. H. T. Ainsworth, Town Hall, Prestwich. Dep. £2 2s.

Westmorland. —Widening.—Widening and improving Windermere-Ings section of Kendal-Keswick-rd., for C.C. Charles E. Hines, C.S. and Bridge Master, 12, Lowther-st., Kendal. Dep. £25.

JANUARY 30.

Dublin.—Dock.—For resurfacing of roadway at coal wharves, Guild-st., North Wall, adjoining Spencer Dock, for Great Southern Railways. A. W. Bretland, Chief Engineer, Westland-row Station, Dublin. Payment 10s.

Tadcaster.—Sewer Extensions.—At Barwick-in-Elmet, for R.D.C. H. W. Boardman, E. to the Council, Tadcaster. Dep. £2 2s.

JANUARY 31.

Altrincham.—Private Street Works.—At Atlantic-st. (extension), for U.D.C. H. E. Brown, surveyor, Town Hall, Altrincham. Dep. £2 2s.

Barnet.—Drainage.—Underdrainage of a recreation field of about 13½ acres at Shenley-rd., Borehamwood, for R.D.C. A. J. Wilshire, S.

Clayton-le-Moors.—Surfacing.—Laying of concrete foundation and surfacing with bituminous asphalt of some 940 yds. in Church-st., for U.D.C. A. Dodgeon, S.

Thornton Cleveleys. — Making-up. — 14 various roads, for U.D.C. H. Fenton, S. Dep. £3 3s.

Wantage.—Sewage.—East Hendred sewerage and sewage disposal scheme, for R.D.C. John W. Harris, civil engineer, East Challow, Wantage. Dep. £2 2s.

FEBRUARY 2.

Cheshire.—Road.—New road from Shotwick to Frodsham, for C.C. G. E. Ashforth, C.S., The Castle, Chester. Dep. £5 5s.

Darton.—Conversion.—Of privies into water closets, for U.D.C. Percival Wilkinson, Assistant Surveyor, Council Offices, Darton.

Northwich.—Sewerage Scheme.—1,300 yds. of sewer, with ancillary works, and the construction of a river crossing, for U.D.C. W. M. Beckett, A.M.I.C.E., Victoria Station House, S.W. Dep. £1 1s.

Stokesley.—Sewerage.—Laying of about 2,250 lin. yds. of 15-in., 12-in., 9-in. and 6-in. diameter sewer in cast-iron and earthenware, etc., for R.D.C. Arnold Brooksbank, A.M.Inst.C.E., 14, The Exchange, Bradford, Yorkshire. Dep. £5 5s.

FEBRUARY 3.

Staffordshire.—Improvement.—At Winterley-lane, Rushall, for C.C. Robert S. Murt, A.M.Inst.C.E., C.S., Lloyds Bank-chams., Stafford. Dep. £2 2s.

FEBRUARY 4.

Caithness.—Roads.—Construction, reconstruction and surfacing of roads from Castletown to Reiss, a length of approximately 12 miles, for C.C. The C. Road S., Wick, Caithness, or the Ministry of Transport, 12, Atholl-crescent, Edinburgh. Dep. £3 3s.

Clacton.—Flagging Scheme.—For various footpaths, for U.D.C. W. Aiston, M.Inst.M. and Cy.E., S., Council Offices, Clacton-on-Sea. Dep. £3 3s.

Liverpool.—Sewers, etc.—For roads and sewers on various housing estates, for T.C. Director of Housing, Municipal Offices, Dale-st. Dep. £1 1s.

FEBRUARY 5.

Hertfordshire. — Tarring. — Surface spraying approximately 4,000,000 sq. yds. of main roads with refined tar of bituminous compounds, for C.C. A. E. Prescott, C.S., Hatfield.

NO DATE.

Fife.—Road Widening.—At Annfield-rd., for C.C. Antony Walker, surveyor, 8, Hunter-st., Kirkcaldy. Dep. £2 2s.

Southampton.—Embankment.—And excavations at Winchester By-pass, Morn Hill section, for County Council. W. J. Taylor, C.S., The Castle, Winchester. Dep. £2 2s.

Public Appointments

JANUARY 28.

Chester.—Quantity Surveyor. County Architect, Newgate-st.

Hinckley.—Clerk of Works. Clerk, Church-st.

JANUARY 29.

Leicester.—Junior Architectural Assistant. City Engineer, Town Hall.

JANUARY 30.

Caernarvon. — Architectural Assistant. Clerk, County Offices.

JANUARY 31.

Dundee.—Architectural Assistant. D. S. McKay, B.Sc., City Engineer, 91, Commercial-st.

FEBRUARY 4.

***Cambridge.**—Architectural Assistant required by the C.C. County Architect, County Hall.

FEBRUARY 5.

***Uxbridge.**—Clerk of Works required by the U.D.C. Clerk, 265, High-st.

PROPOSED NEW BUILDINGS & OTHER WORKS*

In these lists care is taken to ensure the accuracy of the information given, but it may occasionally happen that, owing to building owners taking the responsibility of commencing work before plans are finally approved by the local authorities, "proposed" works at the time of publication have been actually commenced. Abbreviations: T.C. for Town Council; U.D.C. for Urban District Council; R.D.C. for Rural District Council; E.C. for Education Committee; B.C. for Borough Council; P.C. for Parish Council; M.H. for Ministry of Health; M.T. for Ministry of Transport; C.B. for County Borough; B. of E. for Board of Education; M.W.B. for Metropolitan Water Board; Borough Surveyor, B.S.; Borough Engineer, B.E.; District Surveyor, D.S.; Clerk, C.; Town Clerk, T.C.; County Engineer, C.E.; County Surveyor, C.S.; Surveyor, S.; Engineer, E.

Alresford.—R.D.C. proposes new sewerage scheme.

Ashton-under-Lyne.—T.C. to erect houses in West End district. Plans by B.S.

Bacup.—The Bacup and Rossendale Land and Building Co. propose club premises in Princess-st. H. Cropper, architect, 3, South-st.

Baghill.—Pontefract T.C. to acquire estate for houses.

Bakewell.—Scheme being promoted for village hall at Over Haddon. Mrs. W. Beebe, Hon. Sec.

Bangor.—Council adopted report by Sir Cyril Kirkpatrick, C.E., on proposed improvement of harbour. Cost £90,000.

Barnes.—U.D.C. propose £1,500 sports pavilion on Vine-rd. ground.

Barnet.—Extensions are proposed to Guardians' offices.

Barnsley.—A report on housing to be undertaken on a five years' programme is to be submitted to C.B.

Barrow-in-Furness.—T.C. approved:—Club and institute, Schneider-rd., for the Cemetery Cottages Club and Institute; 11 houses in Gateshead-st., for A. Ingham.

Bedworth.—U.D.C. passed: Billiards hall and shop, Leicester-rd., T. H. Randle.

Belfast.—The Ulster Bank proposes new premises in Lisburn-rd., to plans by Blackwood & Jury.

Birmingham.—Ice-rink is proposed in Summerhill-rd. by Ice Rinks, Ltd. S. Clough, F.R.I.B.A., 444, Strand, W.C.2, architect. T.C. passed plans.

Blackpool.—Canon Lupton, of St. Cuthbert's Church, to erect Catholic church at Marton. Architect, R. B. Mather, Birley-st.

Bournemouth.—£2,947 sites have been purchased at Kinson for new schools.

Bradford.—T.C. to erect district baths at Five Lane-ends. Plans by City Architect, W. Williamson.

Bradwell.—P.C. to engage surveyor to prepare plans for shelter, conveniences and layout of land for recreation ground.

Bridgwater.—Plans are being prepared for the adaptation of the Bridgwater institution by the provision of accommodation for the infirm.

Brighton.—New plans for Whitehawk School are to be prepared for E.C.

Buckinghamshire.—£1,100 extensions to Slough police station are proposed by C.C. to plans by County Architect. A new police station is proposed at Chesham. Tenders are to be invited. 6 houses are proposed by County Work Committee.

Burnley.—T.C. recommended extensions to Municipal College at £13,000. Arthur Race, B.S.

Burton.—T.C. proposes 33 houses on Woods-lane, Stapenhill, Gillingham. T.C. passed:—6 pairs of villas, Twydall-lane, F. B. Hooper, for W. H. Holden, preliminary estate plan, Courtfield estate, and 16 houses, Courtfield estate, submitted by W. G. Ingram, for H. G. Featherby.

Caldy.—Golf course is to be extended to 18 holes, at £5,500. Mr. T. S. Fleay, secretary.

Camberley.—£2,300 extensions are proposed to Council Municipal Buildings. Capt. R. H. Porteous, surveyor.

Camberwell.—£835 additional accommodation is proposed by B.C. at High-st conveniences. Plans by B.E. and S.—B.C. proposes urinals at Goose Green, E. Dulwich. Plans by B.E. and S. Tenders are to be invited.—L.C.C. give notice that they propose additional schools (*a*) for 1,300 in district between Brixton-rd., Camberwell New-rd. and Coldharbour-lane, and (*b*) for 600 in East Dulwich.

Carlisle.—Holy Trinity Church proposes new parish hall. A new church, St. Barnabas, is proposed on site at Raffle's estate, Newtown.

Carnick.—£2,069 to be spent on repairs to District Fever Hospital.

Caterham and Warlingham.—U.D.C. passed:—6 houses, Stafford-rd., for C. Baines.

Cavan.—Co. Board of Health adopted following: Bailieboro' water supply, £3,800; Killeshandra water supply, £3,100, and sewerage, £750; Arva sewerage, £1,500; Ballyjamesduff sewerage, £1,400; Kingscourt sewerage, £1,400; Blacklion sewerage, £720; Virginia water, £2,900.

Chelmsford.—T.C. approved: Five pairs of houses, new road off Springfield-rd., J. C. Pryke.

Chesterfield.—Plans approved for reconstruction of Horns Bridge at £23,000.—T.C. to acquire Rose Hill estate for town hall and municipal buildings. Vincent Smith, B.S., to prepare layout.

Coulsdon and Purley.—U.D.C. approved: James & Woodworth, 5 pairs houses, 3 pairs bungalows, Selsdon Park Farm estate, Selsdon; H. Hemmins, 5 garages, St. Andrews-rd., Coulsdon; Mitchley Wood Estate, Ltd., 6 shops with accommodation over, Lower Barn-rd., Sanderstead; A. G. Gresswell, 24 houses and garages, Rickman-hill, Coulsdon; W. Martin, 3 pairs houses, 2 detached houses and garages, Lime Meadow-av., Sanderstead; —. Boakes, workmen's hall, Whytecliffe-rd., Purley; F. W. Thomas, 14 detached houses and garages, Church-way, Sanderstead.

Coventry.—T.C. approved lay-out of Hen-lane housing site.

Crewe.—T.C. is building two schools at £60,000; also proposes new town hall at £20,000.

Crofton (W. Yorks).—E.C. of West Riding C.C. given notice of their intention to erect elementary Council school to accommodate 630 children.

Darlington.—Council propose 28 houses.

Desborough.—U.D.C. approved: New offices in Rothwell-rd. for Co-op. Wholesale Society.

Dewsbury.—E.C. to erect elementary Council schools at Temple-rd. to accommodate 320 children, and a school in Shaw Cross district to accommodate 640 children. Plans by Borough Architect.

Doncaster.—Doncaster Co-op. Society has acquired a site in Carr House-rd. for new stores.

Dublin.—Plans passed by City Architect: St. Patrick's Training College, Drumcondra, new recreation hall; Regal Cinema, Ringsend, new staircase.

Durham.—E.C. decided to carry out following repairs to schools:—Castletown Council school, reinstating of roofs into watertight condition; Chilton Buildings Council school, repairs to boundary wall.

Eastbourne.—Plans are before T.C.:—Eastbourne Corporation (builders, Electricity Dept.), electric sub-stations, St. Anne's-rd. and Lewes-rd.; G. Ellis (architects, P. D. Stonham & Son), alterations, Albion Hotel, Marine-parade; Eastbourne Corporation (architect, Borough Engineer), conveniences, Manor House Grounds, Compton Place-rd., H. Harvey (architect, A. E. Bailey), internal alterations, Pier Hotel, Cavendish-place; Governors of Princess Alice Hospital (architect, T. A. Pole; builders, M. Martin & Sons), alterations and additions, Princess Alice Hospital, Carew-rd.; M. A. Thompson (architects, Scales & Baker), alterations and additions, Park Gates Hotel, Compton-st.; S. D. Foulkes (architect, W. R. Hamblyn; builder, S. D. Foulkes), five pairs of semi-detached houses, Longland-rd; Paine Rogers & Co., Ltd. (architects, P. D. Stonham & Son), warehouse with flats over, Junction-rd.; W. J. Whyman (architects, P. D. Stonham & Son), rebuilding premises, 210 and 212, Seaside.

Edinburgh.—New suite of Masonic Halls at Wardie-rd., for Lodge Trinity 885. Alan Goodwin, architect, 34, Castle-st.

Fakenham.—H.M.O.W. propose P.O. here.

Farnworth.—The Council is building a housing estate of two-bedroomed bungalows which will be let to old-age pensioners and other old couples at a rental, inclusive of rates, of 8s. a week.

Felling.—T.C. approved 752 houses.

Folkestone.—Convenience at Wood-av. and Canterbury-rd. is proposed. Plans by B.E.

Formby.—U.D.C. approved: Three pairs houses, Altcar-rd. and Flaxfield-rd., for W. J. Tracy; lay-out, north side Rosemary-lane, for J. F. L. Formby; amended lay-out, west side Elbow-lane, for J. Formby.

Fremington, Devon.—Southern Railway propose £20,000 port extensions here.

Friern Barnet.—U.D.C. proposes demolition and rebuilding, during next five years, of 69 houses. U.D.C. passed: 8 houses, Friars-av., F. W. Bristow; 12 in Parkway, J. Newman.

Gateshead.—£75,000 baths scheme is sanctioned by M.H.

Glasgow.—Site for new fire station for Northern Glasgow, secured at £2,000. Plans for station, Thos. Gilmour, Corporation Architect, George-sq., Glasgow.

Grangegorman.—Mental Hospital Committee decided to seek sanction to borrow £5,200 for repairs to portion of North Dublin Union premises.

Gt Yarmouth.—T.C. passed:—School in Market-place and St. Nicholas-rd., for Education Committee; and new dairy, Middle Market-rd., for Great Yarmouth Industrial Co-operative Society, Ltd.

Hailsham.—R.D.C. passed plans for automatic telephone exchange at Horsebridge, Hellingly, for G.P.O.

Harrogate.—Justices have approved plans for alterations to Prince of Wales Hotel and Empress Hotel.

Harworth.—Worksop R.D.C. to carry out sanitary conveniences at £800. Surveyor, A. E. Hewett.

Hastings.—T.C. approved:—2 shops, Abbey-drive, Bexleigh Estates, Ltd., owners, H. H. Ford, architect. T.C. proposes 350 additional houses per year for 5 years.

Hendon.—R.D.C. approved: Four houses at Headstone-lane, T. Higgs; 443 houses at New College estate, Harrow Weald, J. Searcy; 10 houses at Gordon-av., four at Kenton-lane, 14 at The Highway and 17 at Hill House-drive, Harrow Weald, Standard Estates, Ltd.; 36 houses at Headstone-drive estate, H. B. Silver, Ltd.; 61 houses at Carmelite-rd. and 22 at Hampden-rd., Harrow Weald, Lambert & Cooke; six houses at Highfield-av., Harrow Garden Village, A. V. Evans; three houses at Priory-way, Pinner, A. J. King; 42 houses at The Drive, Harrow Garden Village, Pinner, E. S. Reid.

Henley.—T.C. passed: Engineering shop and offices at Market-place, for Stuart Turner, Ltd.; rebuilding stores behind Burgis and Gray's premises in Duke-st.

Hertfordshire.—Education Committee proposes new school on site at May's-lane, Underhill, Barnet, to plans by Surveyor, who is also to prepare scheme for elementary school at Littlegrove.

Hull.—A scheme for a swimming bath in Albert-av. is before T.C.

Islington.—M.H. sanction is being sought by B.C. to borrow £9,600 for highway improvement in Crouch Hill.—£15,000 electric main extensions are proposed by B.C.

Kidderminster.—B.S. has planned 56 houses on Sutton Farm housing estate, for T.C. Tenders are to be invited. T.C. proposes 200 houses a year for 5 years.

Lancashire.—C.C. propose Kearsley senior Council school on site of 9¾ acres. Estimated cost £45,034. County Architect, Stephen Wilkinson, F.R.I.B.A., 16, Ribbleadale-place, Preston.

Leominster.—T.C. has instructed Surveyor to prepare lay-out for 50 more houses at Gateway-lane site.

Lewes.—T.C. proposes further houses on Cross Way site.

Leyton.—London Postal Service proposing post office at "Bakers Arms."

Liverpool.—Plans passed:—11 houses and shops, workshop and garages, Queen's-drive, Stoneycroft, R. Owens & Son, Trustees West Derby Waste Lands; alterations to licensed premises, 259-263, Park-rd., Medcalf & Medcalf, for Threlfalls Brewery Co., Ltd.; Church of St. Paul, Formosa-drive, F. W. Nicholson, for Vicar and Parish Council; 4 houses, Larkfield-rd., T. Wainwright & Sons, for J. Davies & Son; 22 houses and garages, Hilltop-rd., Griffith & Lloyd; 8 houses and 6 garages, Dunbabin-rd., Wavertree, R. Owens & Son, for J. Hughes; 6 houses and garages, Thomas-lane, Broad Green, R. Owens & Son, for Peter Lloyd; 28 houses, Pitville-rd., and 114 houses, Pitville-av., G. H. Webber, for Model Homes, Ltd.; billiard hall, 6 lock-up shops and 3 garages, Myrtle-st., corner of Mulberry-st., H. L. Beckwith & F. O. Laurence, for New Hope Hall Cinema, Ltd.; alterations to premises, Gt. Howard-st. and Dundee-st., J. Bibby & Sons, Ltd.; alteration to St. Chad's Church, Walton Breck-rd., C. E. Deacon & Son, for Vicar and Churchwardens; ice rink and sports stadium, Audley-st., Kempston-st., Gildart-st., and Ilford-st., A. E. Shennan, for Ice Rink and Sports Stadium, Ltd.; addition to 33, Belmont-rd., H. L. Goldsmith, for Independent Order of Rachabites.

London (Aston).—Messrs. D. Smith & Barley, architects, 50, Queen Anne's Gate, S.W., have planned 16 houses with garages in Queen's-drive.—G.W.R. propose refreshment room at Western-av., plans by F. W. Showers, G.W.R. Estate Office, Paddington.—U.D.C. passed: Metal shop, etc., in Winchester-place, G. P. Pratt, architect, 174, Acton High-st., W.3; 8 houses, Friary-rd., J. Atherton & Co., 134, East Acton-lane, W.3; 10 houses, for J. A. Perris, in East Acton-lane, L. E. Marsh, architect, Omer-av., Margate.

Lowestoft.—T.C. is to erect 20 concrete bathing chalets near Claremont Pier at £800.

Luton.—T.C. approved:—Conversion shop at corner of Limbury-rd. and Marsh-rd. into bank for Barclays Bank, Ltd.; 12 houses, J. T. Garrett, Osborne-rd.; 12 houses, W. Reeve, Austin-rd.; 8 houses, J. Frost, Selbourne-rd.

Lyme Regis.—30 more houses are proposed on Colway Mead site by T.C.

Manchester.—Plans approved:—schools at St. Ambrose Church, West Didsbury, for R.C. Authorities. H. Greenhalgh, architect, 15, Mawdesley-st., Bolton; school, Victoria-av., Blakeley, for Rev. Father F. Daniel, Church of St. Clare. Harold Greenhalgh, architect, 15, Mawdesley-st., Bolton.—Corporation propose senior school at Newton Heath.—Parks Committee to erect sanitary conveniences on St. Michael's Flats recreation ground.—Public Health Committee propose sanitary conveniences on recreation ground, Ashton Old-rd., Openshaw, and underground sanitary conveniences at All Saints'.—Plans aproved for sanitary conveniences, Butler-st., Ancoats, and plans by City Architect, H. Price.—Architect's Department to E.C. prepared plans for alterations and additions to Moston Council school and preliminary sketch plans for Council school at Crowcroft-pk., Levenshulme.—Three sites reserved for schools on Wythenshawe estate, Northenden.—Corporation making application to borrow £50,000 for extension, Parrswood garage, for Transport Committee, and £12,505 for Education Committee.—Crumpsall Institution to be renovated for Public Health Committee, £2,500 milk storage tanks to be installed at Crumpsall Institution at £466.—Corporation propose widening and reconstructing Manchester-rd. bridge over railway at Chorlton-cum-Hardy. Scheme by City E. Bridge work £90,097, approach roads £9,000, and tramways £2,700.—Sanction received for borrowing £44,550 for public baths and washhouses, £3,350 for purchase and adaptation of premises on land on Holland-st., Manchester, for workshop and store, £8,000 sub-station buildings, £25,000 for establishment of cattle market, adaptation of animal's landing wharf, etc.—Public Health Committee proposing to increase officers' dining-room accommodation at Crumpsall Institution at £3,900. City Architect.—Revised plans been approved for biuldings to be erected at Collyhurst temporary school for E.C. Plans by Architect's Department.

Manchester.—T.C. proposing bus station. Site proposed is portion of old infirmary site at present bounded by Parker-st., which runs between George-st. and Portland-st., behind Piccadilly.

*See also List of Contracts, Competitions, etc

Marsh.—U.D.C. approved: 6 houses, Estover-rd., for L.N.E. Rly.

Market Harborough.—R.D.C. proposes houses on a site at Foxton.

Marple (Ches.).—U.D.C. has appointed Halliday & Agate, F. & A.R.I.B.A., 14, John Dalton-st., Manchester, architects in connection with the Council's 1933 housing scheme.

Meath.—C.C. approved proposal of County Health Board to borrow £25,000 for labourers' cottages.

Mexborough.—West Riding E.C. are to erect a technical school in Park-rd. to cost £25,000. Plans by the C.A., H. Wormald, A.R.I.B.A., County Hall, Wakefield.

Motherwell.—Passed by Motherwell & Wishaw Dean and Guild Court: plans for new advanced school, Hamilton-st., Motherwell. Jno. Stewart, County Master of Works, Albert-st.

Neath.—R.D.C. is informed that a new elementary school for 400 is to be erected by the C.C. at Glynneath.

Newcastle—Five-story building to be erected in Pink-lane, for Jaysons, drapers, Clayton-st. Architect, Marcus Glass, 20, Saville-row. Tenders invited.

Newcastle.—Licensing Justices approved provisionally sketch plans for rebuilding of "Ord Arms" Hotel, Cowgate, Newcastle. Alexander Deuchar, Ltd., purchased premises outright from owner and proposed completely to rebuild inn.

Northwich.—Cheshire County E.C. contemplate the building of four schools, while important reconstruction work is being considered in connection with the three principal non-provided schools.

Oldham.—H.M.O.W. (Storey's-gate, London) propose an employment exchange in Cheapside.

Orpington.—Parish Council approved:—7 detached houses with garages at Grosvenor-rd., E. G. Burr.

Oxford.—Plans passed by T.C.: Pressed Steel Co. of Great Britain, Ltd., Cowley, offices at works off Garsington-rd., Cowley; Norham-gardens Tennis Club, pavilion, Benson-pl.

Pontefract.—T.C. to acquire 10 acres of land at Baghill for a housing estate. B.E., W. H. Newton. —Plans approved for extensions to nurses' hostel in Southgate, for General Infirmary. Tennant & Smith, Ropergate-chams., architects.

Poole.—T.C. approved:—2 pairs semi-detached houses, Blandford-rd., Hamworthy, Crabb & Crabb; 5 houses, Mellstock-rd., J. Jagger; 35 pairs semi-detached houses, S. G. Wheatley for T. J. Rowley; shop extensions to dwelling houses, 12, 14 and 16, Wimborne-rd., E. F. Knight for R. C. Champion; 4 lock-up garages "Shah of Persia Hotel," corner Longfleet and Fernside-rds., H. Kendall for Eldridge, Pope & Co., Ltd.; alterations and additions, Promenade Café, High-st., H. Kendall for Messrs. Hall & Woodhouse, Ltd.; 2 pairs semi-detached houses, Ringwood-rd., Corbin & Clark; 14 houses, Wallisdown-rd., W. J. Clapcott; 7 houses, off Ringwood-rd., C. C. G. Osborne for W. R. Carter; 3 pairs semi-detached houses, Fortescue-rd., C. Hann; amended plan of extensions (gymnasium, etc.) "Riviera Hotel," The Esplanade, Canford Cliffs, W. E. Downs for Mrs. Basson.

Reading.—A £1,200 instruction school near Wilson School is proposed by T.C., also £16,000 school at Caversham. T.C. are to provide £8,347 chapel and crematorium at Henley-rd. Cemetery. Mr. G. Berkeley Wills, architect.

Romford.—R.D.C. passed:—8 houses, Front-lane, Cranham, for A. Walker; 7 houses, Cedar-st., E. Davis; 8 houses, Brentwood-rd., Maylands Estate Co.; 8 houses, Collier Row-lane, F. G. Smith; alterations at Rising Sun Hotel, South-st., Ind, Coope & Co.; 10 houses, Straight-rd., A. T. Smith.

Rotherham.—B.S. has submitted to T.C. a plan for £15,000 extensions to the municipal offices.

Skegness.—U.D.C. approves plans of Lindsey C.C. for new senior school at Skegness.

Sprotborough.—Plans have been prepared for new hotel at the junction of Melton-rd. and Thorpe-lane for T. H. Power.

Selby.—£15,000 water scheme is proposed by R.D.C.

Southend-on-Sea.—C.B. passed:—6 houses, Marguerite-drive, Wiltshire & Bass; 4 flats, Lonsdale-rd., A. S. Chalkley; 6 houses, Chapman's-walk, J. P. O'Connor; 4 houses and shops, London-rd., W. E. Colman; printing works, Prince-av., J. W. Vear; estate plan, Ambleside-drive (between Marlborough-rd. and Huntingdon-rd.), J. C. Ingram, Ltd.

Stockport.—In connection with the proposed covering of the River Mersey by Stockport Corporation, the work of designing the reinforcement has been placed with the British Reinforced Concrete Co., Ltd., of Stafford. The plans for the general work have been prepared in the Borough Surveyor's Department.

Stretford.—U.D.C. received M.H. sanctions to borrowing £2,583, £614, and £1,103, for building work, steam plant and laundry equipment, respectively, for provision of public wash-house in Trafford-park. —Council resolved that plan submitted, with provisional estimate of £8,075, be approved for washhouse in Carriage-st., Old Trafford. P. Howard, architect.—Wall to be built at Longford-pk. at £150. —M.H. to hold inquiry to application for proposed new Council offices.—Plans passed:—7 houses, Davyhulme-rd. East, McLellan & Abel; 12 houses, Granby-rd. and Vernon-av., R. P. Wheeler; 42 houses, Railway-rd. and Tenby-av., Archer & McAlpin; conversion to shop premises, 49, Railway-rd., F. Dennis; conversion to shop premises, 621, Stretford-rd., Manchester & Salford Co-operative Society, Ltd.

Surbiton.—U.D.C. approved:—4 houses, Highfield-rd., English Houses, Ltd.; 4 houses, Ravenscar-rd., J. W. Adams & Sons.

Surrey.—The S. Rly. year's programme provides for two new stations—Waylands, between Esher and Walton, and another between Worcester Park and Ewell.

Swansea.—Sidney Davies proposes erecting houses on site near Cockett Farm.—C.B. approved:—Substation, Pennard-st., for Elec. C.; sports pav., Underhill, Mumbles, for Parks Ctee.—New gym. and craftrooms proposed at £5,000 at Training College, plan by B.A.—A nursery school is proposed by Educ. C. at £5,000 on old Training College site, plans by B.A.—Glamorgan C.C. propose new school for 400 at Skewen.—Shelters at £2,275 are proposed for various parks by C.B.—68 houses (14th group) and 54 houses (15th group) are proposed by C.B. at Townhill site.—C.B. propose branch libraries at Oystermouth and St. John's wards.

Tasburgh.—New concrete bridge is proposed by Norfolk C.C.

Taunton.—T.C. proposes 300 houses in next 5 years.

Thornton Cleveleys.—U.D.C. propose additional buildings at their depôt yard to plans by H. Fenton, S.

Upton (Yorks).—Upton Colliery Co. has decided to erect a further 250 houses.

Wallasey.—Proposed compulsory acquisition of Corporation of land at Moreton for housing been subject of M.H. inquiry.

Warrington.—Plans on foot to erect two stained-glass windows in Church of St. Mary's, Warrington.

Watford.—T.C. passed:—Pavilion, Albert-rd., The Rego Clothiers, Ltd.; extension of works, Whippendell-rd., The Sun Engraving Co.; 6 houses, Orchard-drive, E. W. Puddifoot.—T.C. proposes £1,725 convenience on Hemel Hempstead-rd.

Wednesbury.—U.D.C. is to build 200 houses for each of 5 years.

Wembley.—U.D.C. passed:—Fisher Bros., 5 houses, Ravenscroft-av.; E. A. Lewis, 4 houses, Draycott-av.; A. Marshall, 90 houses, 12 in The Dell, 30 in The Chine, 30 in The Croft and 18 in Eton-av.; C. Sabey, 5 additional houses, 25-33, Greenway; Piggott & Pickett, 24 additional houses, Medway-gdns.; North-West London Estates, Ltd., 7 shops and flats over, Sudbury Heights-av.; N. Harding, 8 houses, Draycott-av., and London Housing Society, Ltd., amended plan 64 houses, showing 6 additional houses, 2 in Bovingdon and 4 in Wigginton-avenues.

West Hartlepool.—T.C. passed: 5 houses, Rosetta-av., for C. & A. Turnbull.

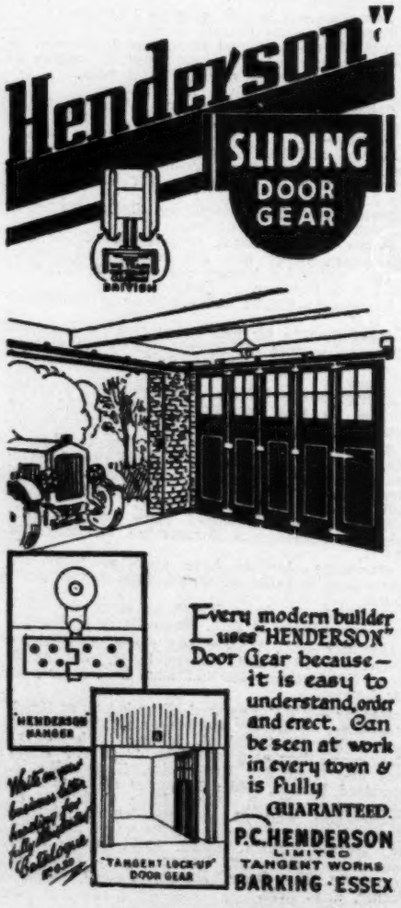
Weymouth.—£25,000 extensions to Weymouth College are proposed. A. G. Pitt, headmaster.

Whickham.—T.C. submitted to M.H. proposal for 800 houses.

Wigan.—Corporation has adopted a five-years' housing programme to build 1,168 new houses at an estimated cost of £480,110.

Wombwell.—An open-air school for tuberculosis children is proposed.

Yeovil.—Postal authorities are inviting tenders for central post office near town hall.


"Henderson"
SLIDING
DOOR
GEAR
"HENDERSON" HANGER
"TANGENT LOCK-UP" DOOR GEAR
Every modern builder uses "HENDERSON" Door Gear because—it is easy to understand, order and erect. Can be seen at work in every town & is fully GUARANTEED.
P.C. HENDERSON LIMITED
TANGENT WORKS
BARKING · ESSEX

THE CURING OF CONCRETE

FIVE of the principal requirements for a sound, durable concrete may be briefly summarised as follows:—(1) Durable and impervious aggregates. (2) High quality cement. (3) Densest possible mix. (4) Thorough mixing and placing. (5) Adequate protection and curing. The first four requirements have already been dealt with (see previous article in our issue for January 9), and a few words may not be out of place in regard to the fifth requirement—adequate protection and curing. Present knowledge of the behaviour of Portland cement concrete whilst setting and hardening indicates that under favourable curing conditions a maximum amount of cement will be hydrated, thus giving the maximum strength to the concrete. In addition to this, concrete will be subject to a minimum amount of volume change during its period of low strength, and therefore cracking will be considerably reduced and other desirable properties such as water-tightness and bond strength materially improved.

Practically all concrete as mixed and placed contains an excess of water over that required for hydration, and the problem of curing is really that of the prevention of the loss of water through evaporation caused by heat, drying winds, etc. The proportion of water actually entering into chemical combination with the cement may vary from as little as 5 per cent. to as much as 25 per cent. to 30 per cent. by weight of the water content, depending upon the age and curing conditions.

The most favourable period for curing is during the first three or four days after the concrete has been placed and finished, but the full value of this operation can only be obtained by employing a suitable medium which will provide the necessary moist conditions over a still longer period. The most usual methods of curing are by the application of water either by sprinkling or ponding or by the use of some suitable covering such as earth, sand, canvas, etc., which can be kept moist.

NEW CINEMAS

Hull.—A new cinema, the "Capitol," is proposed for a site at the corner of West-street. It is understood that building operations will start immediately the clearance of the site is completed, which will probably be in the early spring.

Newton-in-Makerfield.—A local syndicate are proposing the erection of a new cinema in Railway-street and King-street, opposite the L.M.S. Railway Station at Earlestown. The plans are being prepared by Mr. Lionel A. G. Prichard, A.R.I.B.A., 57, Moorfields, Liverpool.

Plumstead.—It is proposed to reconstruct Plumstead Cinema. Plans will be prepared by Mr. Cecil Masey, F.R.I.B.A., of 15, Caroline-street, W.C.1.

West Hartlepool.—The Town Council has approved plans for alterations and additions to the cinema in York-road and Villiers-street for Northern Pictures, Ltd.

Town Planning.

The Garden Cities and Town Planning Association will celebrate in March the coming-of-age of town-planning legislation in Britain. A dinner is to be held at which Mr. John Burns, who was responsible for the Act of 1909, will be the chief guest.

New Police Headquarters, Manchester.

Plans for the new Manchester police headquarters, which are to be built on the site of the old fire station in Jackson's-row, off Albert-square, have been approved by the Watch Committee for submission to the Home Office. The committee also approved plans for a new police headquarters in Platt-lane for the D Division of the force, in whose area Wythenshawe will be included from the date of incorporation in April next.

PRICES CURRENT OF MATERIALS.*

Owing to the exceptional circumstances which prevail at the present time, prices of materials should be confirmed by inquiry.

BRICKS, &c.

Per 1,000 Alongside, in River Thames up to London Bridge.

	£ s. d.
Best Stocks	4 3 6
Second Hard Stocks	3 18 6

Per 1,000. Delivered at London Goods Stations.

	£ s. d.		£ s. d.
Flettons, at King's Cross	2 12 3	Best Blue Pressed Staffs	9 5 0
Do., grooved for Plaster	2 14 3	Bo. Bullnose	9 15 0
Do., Bullnose	3 7 3	Blue Wire Cuts	7 5 0

White Midhurst Facing Bricks (delivered London site) 5 0 0

Best Stourbridge Fire Brick:—
2½ in. ..... 8 11 0 3 in. 10 3 0

GLAZED BRICKS—

Best White Ivory and Salt Glazed Stretcher ...	21 0 0	D'ble Str'tch'rs	29 10 0
		D'ble Headers	26 10 0
Headers	20 10 0	One Side and two Ends ...	30 10 0
Quoins, Bullnose and 4½ in. Splays, and Flats	27 10 0	Two Sides and one End ...	31 10 0
		Squints ...	28 0 0

Second Quality, £1 per 1,000 less than best. Cream and buff, £2 extra over white. Other colours. Hard Glaze, £5 10s. extra over white.

BREEZE CONCRETE SLABS.
Delivered London.

	s. d.		s. d.
2 in. per yd. super	1 11	3 in. per yd. super	2 9
2½ in. „ „	2 4	4 in. „ „	3 6

	s. d.	
Thames Ballast	8 0 per yd.	delivered 2 miles radius Paddington.
Pit Sand	11 0 „ „	
Thames Sand	11 0 „ „	
Best Washed Sand	11 6 „ „	
½ in. Shingle for Ferro-Concrete	8 6 „ „	
¼ in.	11 0 „ „	
½ in. Broken Brick	10 6 „ „	
Pan Breeze	8 0 „ „	

Per ton delivered in London area in full van loads.
Best Portland Cement. British.
Standard Specification. Test £2 6 0 to £2 8 0
39s. alongside at Vauxhall in 80-ton lots.

Ferrocrete per ton extra on above	0 7 6
Vitocrete „ „	0 7 6
Super Cement (Waterproof)	3 16 0
Ciment Fondu (F.O.R. Works)	4 15 0
Roman Cement	8 15 0
Parian Cement	5 15 0
Keene's Cement, White	5 15 0
„ „ Pink	5 10 0
Plaster, Coarse, Pink	3 0 0
„ „ White	3 12 6
„ Fine	5 12 0
Sirapite, Coarse	3 9 0
„ Finish	3 17 0
Grey Stone Lime	2 10 9
Chalk Lime	2 10 9
Best Ground Blue Lias Lime	1 17 6
Hair .....per cwt.	2 2 6
Granite Chippings	1 12 0

NOTE.—Sacks are charged 1s. 9d. each and credited 1s 6d. if returned in good condition within three months carr. pd.
Stourbridge Fireclay in s'cks 37s. 0d. per ton at rly. dp.

STONE.

BATH STONE.—Delivered in railway trucks at Westbourne Park, Paddington, G.W.R., or South Lambeth, G.W.R., per ft. cube..... s. d. 2 10

BEER STONE—RANDOM BLOCK—
Free on rail at Seaton Station per ft. cube 2 3
Delivered free on rail Nine Elms, S.R. per ft. cube 3 1½
Selected approximate size one way, 1d. per cubic foot extra; selected approximately three sizes or for special work, 3d. per cubic foot extra.

PORTLAND STONE—
Brown Whitbed, in random blocks of 20 ft. average, delivered in railway trucks at Nine Elms, S. Rly., South Lambeth Station, G.W.R., and Westbourne Park, Paddington, G.W.R., per ft. cube 4 4½
Do. do. delivered on road wagons at above stations, per ft. cube 4 5½
White basebed, 3d. per ft. cube extra.
NOTE.—1d. per ft. cube extra for every foot over 20 ft. *average*, and ½d. beyond 30 ft.

CHILMARK—RANDOM BLOCK—
At Nine Elms, per ft. cube..... 3 11

HOPTON-WOOD STONE—
F.O.R. Quarries, Wirksworth, Derbyshire, s. d.
Random blocks from 10 ft. and over P. ft. cb. 1 4 0
Sawn two sides ..... „ 22 6
Sawn three or four sides ..... „ 27 6

YORK STONE, BLUE—*Robin Hood Quality.*
Delivered at any Goods Station, London
6 in. sawn two sides landings to sizes (under 30 ft. super) .....Per ft. super 5 6
6 in. rubbed two sides, ditto..... „ 6 0
3 in. sawn two sides slabs (random sizes) „ 2 3½
2 in. to 2½ in. sawn one side slabs (random sizes) ..... „ 1 6½
1½ in. to 2 in. ditto, ditto ..... „ 1 3½

HARD YORK—
Delivered at any Goods Station, London.
Scappled random blocks ....Per ft. cube 6 3
6 in. sawn two sides landing to sizes (under 40 ft. super) .....Per ft. super 5 1½
6 in. rubbed two sides, ditto ..... „ 6 1½
4 in. sawn two sides slabs (random sizes) „ 2 1½
3 in. ditto ditto „ 2 10
2 in. self-faced random flags.....Per yd. super 8 0

CAST STONE.

Delivered in London area in full van loads, per ft. cube: Plain, 8s. 6d.; Moulded, 9s. 6d.; Cills, 10s. 0d

WOOD.

GOOD BUILDING DEAL.

Inches.	per stan.	Inches.	per stan.
4 × 11	£27 10	3 × 6	£20 0
4 × 9	26 0	3 × 11	22 0
4 × 8	25 0	2 × 11	23 0
4 × 7	23 0	3 × 9	22 0
3 × 8	20 0	2½ × 9	22 0
3 × 7	20 0	3 × 4½	20 0
2½ × 7	20 0	3 × 4	20 0

PLANED BOARDS.
1 × 11 ..... £28 0 1 × 9 ..... £26 0

PLAIN EDGE FLOORING.

Inches	per sq.	Inches.	per sq.
⅝	18/-	1¼	29/-
¾	20/-	1½	32/-
1	23/-		

TONGUED AND GROOVED FLOORING

Inches.	per sq.
1	24/-
1¼	30/-
1½	34/-

ins. BATTENS. s. d
⅞ × 2.....per 100 ft. 2 6

MATCHING (BEST).

Inches.	per sq.
⅝	16/6
¾	19/-
1	24/-

SAWN LATHS. s. d.
Per bundle 2 0

1 INCH AND UP THICK.

Average price for prime quality.	£ s. d.
Dry Austrian Wainscot, per ft. cubs.....	0 15 0
Dry American and/or Japanese Figured Oak, per ft. cube.....	0 12 0
Dry American and/or Japanese plain Oak, per ft. cube	0 10 0
Dry sq. edged Honduras Mahogany, per ft. cube.....	0 14 0
Dry log-cut Honduras Mahogany, per ft. cube.....	0 16 0
Dry Cuba Mahogany, per ft. cube	1 1 0
Dry Teak, per ft. cube	0 14 0
Dry American Whitewood, per ft. cube...	0 10 0
Best Scotch Glue, per cwt. ... £4 10 0 to	—
Liquid Glue, per cwt.	4 7 0 to 5 10 0

SLATES

First quality slates from Bangor or Portmadoc carriage paid in full truck loads to London Rate Station. Per 1,000 actual.

	£ s. d.		£ s. d.
24 by 12	31 0 0	18 by 10	17 5 0
22 by 12	27 19 6	18 by 9	15 10 0
22 by 11	25 5 0	16 by 10	14 14 6
20 by 12	24 7 6	16 by 8	11 5 0
20 by 10	20 17 6		

TILES

Delivered at London rate stations in full truck loads of not less than 6 tons. Per 1,000. f.o.r. London.

Best machine-made tiles from Broseley or Staffordshire district £5 2 6
ditto hand-made ditto 5 7 6
Ornamental ditto 5 12 6
Hip and valley tiles (per dozen) { Hand-made ..... 0 9 6; Machine-made 0 9 0

METALS.

JOISTS, GIRDERS, &c., TO LONDON STATION, PER TON—

R.S. Joists, cut and fitted.....	£12 10 0
Plain Compound Girders	14 10 0
„ Stanchions	16 10 0
In Roof Work	19 10 0

MILD STEEL ROUNDS.—To London Station, per ton

Diameter.	£ s. d.	Diameter.	£ s. d.
¼ in.	12 0 0	⅝ in. to ½ in.	10 15 0
⅜ in.	11 0 0	⅝ in. to 2½ in.	10 10 0

WROUGHT-IRON TUBES AND FITTINGS—
(Discount off List for lot of not less than £7 net value delivered direct from Works, 2½ per cent. less above gross discounts, carriage forward, if sent from London Stocks.)

	Tubes. Wrought Mild Steel.	Tubes. Genuine Staffs. Iron.	Fittings. ⅜ in. and under.	Fittings. Over ⅜ in.	Flanges. ⅜ in. and under.	Flanges. Over ⅜ in.
	%	%	%	%	%	%
Gas	65	52½	45	47½	55	57½
Water	61½	48½	40	42½	50	52½
Steam	57½	45	35	37½	45	47½
Galv. gas ...	52½	40	35	37½	45	47½
Galv. water...	47½	35	30	32½	40	42½
Galv. steam	42½	30	25	27½	35	37½

*C.I.—HALF-ROUND GUTTERS—London Prices ex Works

Per yd. in 6 ft. lengths.	Gutters.	Angles and Nozzles.	Stop Ends.
3 in.	10d.	7½d.	2½d.
3½ in.	10½d.	8½d.	2½d.
4 in.	10½d.	9½d.	2½d.
4½ in.	11½d.	10½d.	2½d.
5 in.	1/1½	11½d.	3½d.

*O.G. GUTTERS.

3 in.	1/0	10½d.	2½d.
3½ in.	1/0½	10½d.	2½d.
4 in.	1/1½	10½d.	2½d.
4½ in.	1/2½	1/0½	2½d.
5 in.	1/5	1/2½	3½d.

*RAIN-WATER PIPES, &c.

Per yd. in 6 ft. Pipe.		Bends, stock Branches, angles, stock angles.	
2 in. plain.....	1/2½	9½d.	1/2
2½ in. „	1/3	10½d.	1/4
3 in. „	1/6½	1/1½	1/8½
3½ in. „	1/11	1/4½	1/11½
4 in. „	2/2½	1/7½	2/4½

*The above R.W. Goods prices are subject to an advance of 5% from October 29th, 1929.

L.C.C. COATED SOIL PIPES—London Prices ex Works.

	Bends, stock Branches, Pipe, angles, stock angles.		
	s. d.	s. d.	s. d.
2 in. per yd. in 6 fts. plain	2 5	1 9	2 1
2½ in. „	2 9½	1 10½	2 7
3 in. „	3 0	2 1	3 1
3½ in. „	3 3	2 7	3 7
4 in. „	3 8	2 11	4 1½

L.C.C. COATED DRAIN PIPES—London Prices ex Works

	Bends, stock Branches, Pipe, angles, stock angles.		
	s. d.	s. d.	s. d.
3 in. per yd. in 9ft. lengths	3 6	4 6	7 0
4 in. „ „	4 8	5 5	9 3
5 in. „ „	6 3	9 6	15 0
6 in. „ „	7 3	1 6	19 0

Gasken for jointing 41/- per cwt.

	Per ton in London.
IRON—	£ s. d. to £ s. d.
Common bars	11 0 0 to 12 0 0
Staffordshire Crown Bars— Good merchant quality	11 5 0 to 12 5 0
Staffordshire Market Bars	14 0 0 ... 15 0 0
Mild Steel Bars	9 10 0 ... 10 10 0
Steel Bars, Ferro-Concrete quality, basis price	9 0 0 ... 10 0 0
Hoop iron, basis price	11 0 0 ... 12 0 0
„ Galvanised ...	27 0 0 ... 28 0 0
Soft Steel Sheets, Black—	
Ordinary sizes, to 20 g. ...	11 10 0 ... 12 0 0
„ „ „ 24 g. ...	13 0 0 ... 14 0 0
„ „ „ 26 g. ...	15 0 0 ... 16 0 0
Sheets Flat Best Soft Steel, C.R. and C.A. quality—	
Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 20 g.....	14 10 0 ... 15 10 0
Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 22 g. and 24 g.	15 10 0 ... 16 10 0
Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 26 g.....	18 10 0 ... 19 5 0
No. 1 quality £4 per ton extra.	
Flat and Galvanised Corrugated Sheets—	
Ordinary sizes 6 ft. to 9 ft. to 20 g.	15 0 0 ... 16 0 0
Ordinary sizes 6 ft. to 9 ft. to 22 g. and 24 g.	15 10 0 ... 16 10 0
Ordinary sizes, 6 ft. to 9 ft. to 26 g.	18 10 0 ... 19 10 0
Sheets Galvanised Flat, Best quality—	
Best Soft Steel Sheets, 6 ft. by 2 ft. to 3 ft. to 20 g. and thicker	20 10 0 ... 21 10 0
Best Soft Steel Sheets, 22 g. and 24 g.	22 10 0 ... 24 10 0
Best Soft Steel Sheets, 26 g.	24 0 0 ... 25 0 0
Cut Nails, 3 in. to 6 in. ...	16 0 0 ... 17 0 0
(Under 3 in. usual trade extras.)	

METAL WINDOWS.—Standard sizes, suitable for complete houses, including all fittings, painting two coats, and delivery to job, average price about 1s. 4d. to 1s. 7d. per foot super.

LEAD, &c.

(Delivered in London.)	£ s. d.
LEAD—Sheet, English, 4 lb. and up	23 0 0
Pipe in coils	23 10 0
Soil pipe	26 10 0
Compo pipe	27 10 0

NOTE.—Country delivery, 20s. per ton extra: lots under 3 cwt. 3s. per cwt. extra, and over 3 cwt. and under 5 cwt., 1s. 6d. per cwt. extra. Cut to sizes, 5s. cwt. extra.
Old lead, ex London area, at Mills .....per ton £13 0 0

COPPER.

	s. d.
Seamless Copper tubes (basis) ..... per lb.	1 3
Strong sheet..... „	1 0
Thin ..... „	1 1
Copper nails ..... „	1 7
Copper wire ..... „	1 4

PLUMBERS' BRASS WORK.
Delivered in London.

NEW RIVER PATTERN SCREW DOWN BIB COCKS FOR IRON.

½ in.	¾ in.	1 in.	1¼ in.	1½ in.	2 in.
29/-	45/-	76/-	153/-	246/-	510/- per doz.

NEW RIVER PATTERN SCREW DOWN STOP COCKS AND UNIONS.

½ in.	¾ in.	1 in.	1¼ in.	1½ in.	2 in.
41/6	62/-	92/-	174/-	300/-	588/- per doz.

RIVER PATTERN SCREW DOWN MAIN FERRULES.

½ in.	¾ in.	1 in.
39/6	60/-	116/6 per doz.

CAPS AND SCREWS.

1¼ in.	1½ in.	2 in.	3 in.	3½ in.	4 in.
7/6	10/-	14/-	23/-	30/-	42/- per doz.

DOUBLE NUT BOILER SCREWS.

½ in.	¾ in.	1 in.	1¼ in.	1½ in.	2 in.
7/6	11/-	17/-	29/-	36/-	63/- per doz.

BRASS SLEEVES.

1¼ in.	2 in.	3 in.	3½ in.	4 in.
10/-	12/-	20/-	24/-	31/- per doz.

NEW RIVER PATTERN CROYDON BALL VALVES, S.F.

½ in.	¾ in.	1 in.	1¼ in.	1½ in.
35/-	56/-	98/-	162/-	228/- per doz.

DRAWN LEAD P. & S. TRAPS WITH BRASS CLEANING SCREW.

1¼ in.	1½ in.	2 in.	3 in.
8 lbs. P. traps ...	33/-	41/-	56/-	101/- per doz.
8 lbs. S. traps ...	35/-	45/-	66/-	126/- „

TIN.—English Ingots, 1/5 per lb. SOLDER.—Plumber's 8d., Tinmen's 10d., Blowpipe 11d. per lb.

PAINTS, &c.

Raw Linseed Oil, in pipes	per gallon ...	0	2 3
„ „ „	in barrels ... „ ...	0	2 5
„ „ „	in drums ... „ ...	0	2 8
Boiled „ „	in barrels ... „ ...	0	2 8
„ „ „	in drums ... „ ...	0	2 10
Turpentine in barrels	„ ...	0	3 3
„ in drums (10 galls.)	„ ...	0	3 5
Genuine Ground English White Lead, per ton		45	10 0

(In not less than 5-cwt. casks.)
Extra for 1-cwt. kegs over 5-cwt. casks is 5/0 cwt.

* The information given on this page has been specially compiled for THE BUILDER, and is copyright. The aim in this list is to give, as far as possible, the *average* prices of materials, not necessarily the highest or lowest. Quality and quantity obviously affect prices—a fact which should be remembered by those who make use of this information.

PRICES CURRENT OF MATERIALS—(*cont.*)

PAINTS, &c.—(*cont.*)

GENUINE WHITE LEAD PAINT.

	£ s. d.
"Father Thames," "Nine Elms," "Park," "Supremus," "St. Paul's," "Morganwyte," "Polacco," "J" Brand, and other best brands (in 14-lb. tins) not less than 5 cwt. lots	
per ton delivered	63 10 0
Red Lead, Dry (packages extra) per ton	34 0 0
Best Linseed Oil Putty per cwt.	0 15 6
Filicol ,,	0 16 6
Size, XD quality ... fkn.	0 3 0

GLASS.

ENGLISH SHEET GLASS IN CRATES OF STOCK SIZES.

Per ft.		Per ft.
15 oz. fourths	2½d.	32 oz. fourths 6½d.
15 ,, thirds	3½d.	32 ,, thirds 9d.
21 ,, fourths	3½d.	Obscured Sheet, 15 oz. 3½d.
21 ,, thirds	4½d.	,, 21 oz. 4½d.
26 ,, fourths	4½d.	Fluted, 15 oz. 7d., 21 oz. 9½d.
26 ,, thirds	6½d.	Enamelled, 15 oz. 4½d., 21 oz. 6d.

Extra price according to size and substance for squares cut from stock.

ENGLISH ROLLED plate in CRATES OF STOCK SIZES. Per ft.

¼ Rolled plate	4½d.
⅜ Rough rolled	5½d.
Rough rolled	5½d.
Figured Rolled, Baltic, Oceanic, Arctic, Stippolyte, and small and large Flemish White	5½d.
Ditto, tinted	8½d.
Rolled Sheet	4½d.
White Rolled Cathedral	5d.
Tinned do.	7d.

Cast plate is same price as rough rolled.

"VITA" GLASS.	Per foot. s. d.
Clear sheet—not exceeding 1 foot	1 0
Do. do. 2 feet	1 3
Do. over 2 feet	1 9
Polished plate—not exceeding 1 foot	1 6
Do. not exceeding 2 feet	3 0
Cathedral—not exceeding 1 foot	1 0
Do. larger sizes	1 6
Horticultural—for greenhouses, etc. Sizes up to 24 inches by 18 inches or not exceeding 3 feet	1 0
3/16 in. Wired Georgian Design. Sizes up to 108 inches long by up to 24 inches wide	2 6

ULTRA VIOLET RAY GLASS.

RAYLITE.

Up to 2 sq. ft. 1/-. Up to 4 sq. ft. 1/2. Up to 8 sq. ft. 1/3.

FORRIGN.

HORTIREX (HORTICULTURAL).

Up to 1 sq. ft. 7d. Up to 2 sq. ft. 8d. Up to 3 sq. ft. 9d. (Not exceeding 24 in. by 18 in.)

Up to 4 sq. ft. 10d. Up to 8 sq. ft. 11d.

VARNISHES, &c.

		Per Gallon. £ s. d.
Oak Varnish	Outside	0 14 0
Fine ditto	ditto	0 16 0
Fine Copal	ditto	0 18 0
Pale Copal	ditto	1 0 0
Pale Opal Carriage	ditto	1 4 0
Best ditto	ditto	1 12 0
Floor Varnish	Inside	0 18 0
Fine Pale Paper	ditto	0 18 6
Fine Copal Cabinet	ditto	1 2 6
Fine Copal Flatting	ditto	1 0 0
Hard Drying Oak	ditto	0 18 6
Fine Hard Drying Oak	ditto	0 19 6
Fine Copal Varnish	ditto	1 0 0
Pale ditto	ditto	1 12 6
Best ditto	ditto	1 2 6
Best Japan Gold Size		0 12 0
Best Black Japan		0 10 0
Oak and Mahogany Stain (water)		0 12 0
Brunswick Black		0 7 0
Berlin Black		0 14 0
Knotting (patent)		1 5 0
French and Brush Polish		0 17 0
Liquid Dryers in Terebene		0 9 0
Culrass Black Enamel		0 7 0

Liverpool New Cathedral Site Clearance.

The first step towards the construction of the new Roman Catholic Cathedral in Liverpool, the clearance of the old Brownlow-hill workhouse site, has now begun.

L.M.B. Sports Association.

We give below table and results in the Football League of this Association up to Saturday, January 17 :—

RESULTS

Downs	...	...	0 Higgs	...	... 4
Scafco	...	...	3 Elsilrac	...	... 0
Wills	...	...	2 Portland	...	... 2

TABLE.

	P.	W.	D.	L.	Goals. F.	A.	Pts.
Wills	... 12	10	2	—	65	12	22
Trocoll	... 12	8	2	2	63	14	18
Scafco	... 13	9	—	4	30	20	18
Portland	... 13	7	3	3	33	25	17
Higgs	... 11	4	2	5	35	30	10
Downs	... 14	—	2	12	8	61	2
Elsilrac	... 13	—	1	12	8	80	1

THE SCOTTISH BUILDER

NEW BUILDINGS

Aberdeen. — HOTEL.—Plans have been passed by the T.C. for alterations and improvements to the Caledonian Hotel, Union-terrace.

Arbroath.—HOUSING.—At a meeting of Arbroath Town Council it was agreed to make application to the Department of Health for their specific approval of a housing scheme embracing the erection of 48 houses for purposes of subsidy. The site is of 2,138 acres, at Brechin and Montrose-roads.

Ayr.—HOUSING.—Ayr Town Council agreed to remit back for further consideration a proposal of the Housing Committee that there should be erected, under the 1930 Act, 100 houses of four apartments and 115 houses of three apartments at Lochside.

Clydebank.—HOUSES.—The T.C. proposes the erection of 1,346 houses during the next three years.

Dundee.—NEW BUILDINGS.—Plans of the following proposed buildings have been lodged at the office of the City Engineer, and were submitted to the Town Council :—Ancrum-drive—garage for Mr. George Sturrock (Messrs. Johnston & Baxter, architects, 114, Seagate); Kinghorne-road—dwelling-house for Mr. William Black (plan by petitioner); Minard-crescent — dwelling-house for Mr. David Bowman (plan by petitioner); North George-street—alterations for Mrs. Mary McLauchlan (Mr. Robert Gibson, architect, 2, India Buildings); Old Glamis-road — tomato houses for Messrs. Cowie & Fraser (Messrs. Gordon & Scrymgeour, architects, 7, Ward-road); Panmure-terrace, Barnhill—cottages for Mr. James Small (plans by petitioner); School-road, Downfield — dwelling-houses for Messrs. Ogilvy & Stewart (plans by petitioners).

Forres.—PRESBYTERY.—Tenders have been accepted for the erection of a presbytery at the Roman Catholic Church.

Glasgow.—SCHOOL EXTENSIONS.—Glasgow E.C. proposes £50,000 extensions to Glasgow High School, Elmbank-street. The scheme includes laboratories, workshops, and an examination hall.

Milngavie.—HOUSES.—100 houses are proposed by the T.C. during the next three years.

Paisley.—HOUSING.—A lay-out plan showing a scheme of 222 tenement houses for ground at Shortroods, Paisley, was formally approved at a meeting of the Town Council.

Rothesay.—PUBLIC HALL.—The Town Council is considering the reconstruction of the building at Battery-place, now known as the Madeira Palais de Danse, as a public hall, and has authorised the purchase of plans prepared by Mr. C. J. M'Nair, architect, Glasgow.

Troon.—PUBLIC BUILDINGS.—An important scheme involving the expenditure of at least £30,000 is about to be proceeded with in Troon, the Town Council having approved of the erection of Council Chambers and a pavilion for entertainments. A start is to be made with the work in March.

BUILDING TRADE WAGES IN SCOTLAND*

The following are the present rate of wages in the building trade in the principal towns of Scotland. Every endeavour is made to ensure accuracy, but we cannot be responsible for errors that may occur.

	Masons.	Bricklayers.	Carpenters, Joiners.	Plasterers.	Slaters.	Plumbers.	Painters.	Labourers—Masons'‡ Bricklayers'† Plasterers'.†
Aberdeen	1/7	1/7	1/7	1/8	1/7	1/7	1/8	1/2½
Airdrie	1/7	1/7	1/7	1/8	1/7	1/7	1/8	‡1/2½ †1/2½
Alexandria	1/7	1/7	1/7	1/8	1/7	1/7	1/8	‡1/2½ †1/3½
Arbroath	1/6	1/6	1/6	1/7	1/6	1/6	1/8	1/1
Ayrshire	1/7	1/7	1/7	1/8	1/7	1/7	1/8	1/2½
Bathgate	1/7	1/7	1/7	1/8	1/7	1/7	1/8	1/2 1/3
Berwickshire	1/6	1/6	1/6	1/7	1/6	1/6	1/8	1/1½
Bo'ness	1/7	1/7	1/7	1/8	1/7	1/7	1/8	†1/2½
Broughty Ferry	1/7	1/7	1/7	1/8	1/7	1/7	1/8	‡1/2½ †1/3½
Clackmannanshire	1/7	1/7	1/7	1/8	1/7	1/7	1/8	1/2½
Coatbridge	1/7	1/7	1/7	1/8	1/7	1/7	1/8	‡1/2½ †1/3½
Dumbartonshire	1/7	1/7	1/7	1/8	1/7	1/7	1/8	1/2½
Dumfries	1/6	1/6	1/6	1/7	1/6	1/6	1/8	1/1
Dumfriesshire	1/6	1/6	1/6	1/7	1/6	1/6	1/8	1/1½
Dundee	1/7	1/7	1/7	1/8	1/7	1/7	1/8	1/2½
Dunfermline	1/7	1/7	1/7	1/8	1/7	1/7	1/8	1/2½
Dunoon	1/7	1/7	1/7	1/8	1/7	1/7	1/8	1/2½
East Lothian	1/7	1/7	1/7	1/8	1/7	1/7	1/8	1/2½
Edinburgh	1/7	1/7	1/7	1/8	1/7	1/7	1/8	1/2½
Falkirk	1/7	1/7	1/7	1/8	1/7	1/7	1/8	1/2½
Forfarshire	1/6	1/6	1/6	1/7	1/6	1/6	1/8	1/1½
Fort William	1/6	1/6	1/6	1/7	1/6	1/6	1/8	1/2
Galashiels	1/6	1/6	1/6	1/7	1/6	1/6	1/8	1/1
Glasgow	1/7½	1/8	1/7½	1/8½	1/7½	1/7½	1/8	1/2½
Greenock	1/7	1/7	1/7	1/8	1/7	1/7	1/8	1/2½
Hamilton	1/7½	1/7½	1/7½	1/8½	1/7½	1/7½	1/8	‡1/2½ †1/3½
Hawick	1/6	1/6	1/6	1/7	1/6	1/6	1/8	1/1
Helensburgh	1/7	1/7	1/7	1/8	1/7	1/7	1/8	‡1/2½ †1/3½
Inverness	1/6	1/6	1/6	1/7	1/6	1/6	1/8	1/1 1/3
Inverurie	1/6½	1/6½	1/6½	1/7½	1/6½	1/6½	1/8	1/2
Kilmarnock	1/7½	1/7½	1/7½	1/8½	1/7½	1/7½	1/8	1/2½
Kincardineshire	1/6	1/6	1/6	1/7	1/6	1/6	1/8	1/1
Kinross-shire	1/7	1/7	1/7	1/8	1/7	1/7	1/8	1/2½
Kirkcaldy	1/7	1/7	1/7	1/8	1/7	1/7	1/8	1/2½
Kirkwall	1/5	1/5	1/5	1/6	1/5	1/5	1/8	1/-
Lanarkshire	1/7	1/7	1/7	1/8	1/7	1/7	1/8	1/2½
Leith	1/7	1/7	1/7	1/8	1/7	1/7	1/8	1/2½
Midlothian	1/7	1/7	1/7	1/8	1/7	1/7	1/8	1/2½
Motherwell	1/7½	1/7½	1/7½	1/8½	1/7½	1/7½	1/8	‡1/2½ †1/3½
Peeblesshire	1/6	1/6	1/6	1/7	1/6	1/6	1/8	1/1
Perth	1/7	1/7	1/7	1/8	1/7	1/7	§1/8	1/2½
Perthshire	1/6	1/6	1/6	1/7	1/6	1/6	1/8	1/1½
Peterhead	1/6½	1/6½	1/6½	1/7½	1/6½	1/6½	1/8	1/2
Renfrewshire	1/7	1/7	1/7	1/8	1/7	1/7	1/8	1/2½
Rothesay	1/7	1/7	1/7	1/8	1/7	1/7	1/8	1/2½
Roxburghshire	1/6	1/6	1/6	1/7	1/6	1/6	1/8	1/1½
St. Andrew's	1/7	1/7	1/7	1/8	1/7	1/7	1/8	1/2½
Selkirkshire	1/6	1/6	1/6	1/7	1/6	1/6	1/8	1/1
Stirling	1/7	1/7	1/7	1/8	1/7	1/7	1/8	‡1/2½ †1/3½
Stirlingshire, West	1/6	1/6	1/6	1/6	1/6	1/6	1/8	1/1
Stornoway	1/6	1/6	1/6	1/7	1/6	1/6	1/8	1/1
West Lothian	1/7	1/7	1/7	1/8	1/7	1/7	1/8	1/2½
Wishaw	1/7½	1/7½	1/7½	1/8½	1/7½	1/7½	1/8	‡1/2½ †1/3½

* The information given in this table is copyright

The rates of wages in various towns in England and Wales are given on page 206.

§ Perth painters are at present on strike against the reduction.

CURRENT PRICES FOR BUILDING WORK IN LONDON*

EXCAVATOR.

		s.	d.
Digging and throwing or wheeling and filling carts, and carting away to shoot—6 ft. deep	per yard cube	11	0
Add if in clay	" "	1	0
Add for every additional depth of 6 ft.	" "	0	6
Planking and strutting to trenches	per foot super	0	5
Do. to sides of excavation, including shoring	" "	1	0

CONCRETOR.

		s.	d.
Portland cement concrete in foundation 1 to 6	per yard cube	38	0
Add if in underpinning in short lengths	" "	7	0
Add if in floors 6 in. thick	" "	3	3
Add if in beams	"	3	9
Add if aggregate 1 : 2 : 4	"	10	0
Add for hoisting not exceeding 10 ft. beyond the first 10 ft.	" "	2	6

BRICKLAYER.

		£	s.	d.
Reduced brickwork in lime mortar and Fletton bricks	per rod	32	0	0
Add if in stocks	"	7	10	0
Add if in Staffordshire blues	"	22	0	0
Add if in Portland cement and sand	"	1	10	0

FACINGS.

		s.	d.
Extra for facing in English or Flemish bond for every 10s. per 1,000 over the price of the common bricks	per ft. super	0	1¼

POINTING.

		s.	d.
Neat flat struck or weathered joint		0	3

ARCHES.

		s.	d.
Extra only to the price of ordinary brickwork :—			
Fair external in half brick rings	" "	0	10
Axed in stocks	" "	1	9
Rubbed and gauged jointed in putty camber or segmental	" "	6	0

SUNDRIES.

		s.	d.
Damp course in double course of slates breaking joint and bedded in Portland cement	" "	1	0
Setting ordinary register grates and stoves	each	1	0
Setting kitchener, including forming flues, &c., with all necessary fire bricks	"	4 15	0

ASPHALTER.

		s.	d.
Half-inch horizontal damp course	per yard super	4	6
Three-quarter-inch vertical damp course	" "	9	6
Three-quarter-inch on flats in two thicknesses	" "	6	3
Angle fillet	per foot run	0	3
Skirting and fillet 6 in. high	" "	1	2

MASON.

		s.	d.
York stone templates fixed	per foot cube	13	0
York stone sills fixed	" "	22	0
Bath stone and all labour fixed	" "	10	6
Beer stone and all labour fixed	" "	15	0
Portland stone fixed	" "	20	0
Chilmark stone fixed complete	" "	17	6

SLATER.

		s.	d.
Welsh 16 in. × 8 in. 3 in. lap, including nails	per square	72	9
Do. 20 in. × 10 in. Do. Do.	"	80	9
Do. 24 in. × 12 in. Do. Do.	"	90	0

CARPENTER AND JOINER.

		s.	d.
Fir framed in plates	per foot cube	5	0
Do. joists	" "	5	6
Do. roofs, floors and partitions	" "	6	0
Do. trusses	" "	8	6

		¾"	1"	1¼"	2"
Deal rough close boarding	per sq.	35/6	40/-	45/-	72/-

		s.	d.
Flat centering for concrete floor, including struts or hangers	"	50	0
Do. to beams	per ft. sup.	0	11
Centre for arches	"	1	6
Gutter boards and bearers	"	1	0

FLOORING.

		¾"	1"	1¼"	1½"
Deal-edges shot	per sq.	—	44/6	53/-	60/6
Do. tongued and grooved	"	—	49/-	57/6	65/-
Do. matchings	"	45/-	51/-	—	—
Moulded skirting, including backings and grounds	per ft. sup.	1/6	1/9	2/-	2/6

SASHES AND FRAMES

		s.	d.
One-and-a-half moulded sashes or casements	per foot super	1	10
Two Do. Do. Do.	" "	2	1
Add for fitting and fixing	" "	0	3
Deal-cased frames with 1 in. inner and outer linings, 1½ in. pulley stiles tongued to linings, hard wood sills with 2 in. moulded sashes in squares, double hung, double hung with pulleys, lines and weights : average size	"	3	9

DOORS.

		1½"	1¾"	2"
Two-panel square framed	per ft. sup.	2/1	2/4	2/6
Four-panel Do.	"	2/5	2/8	2/11
Two-panel moulded both sides	"	2/8	2/11	3/2
Four-panel Do. Do.	"	2/11	3/2	3/5

CARPENTER AND JOINER—continued

FRAMES.

		s.	d.
Deal wrot moulded and rebated	per foot cube	14	0

		1"	1¼"	1½"
Plain deal jamb linings framed	per ft. sup.	1/7	1/8	1/11
Deal shelves and bearers	"	1/4	1/6	1/9
Add if cross-tongued	"	2d.	2d.	2d.

STAIRCASES.

		1"	1¼"	1½"	2"	2½"
Deal treads and risers in and including rough brackets		2/1	2/4	2/9	—	—
Deal strings wrot on both sides and framed		1/8	2/-	2/2	2/8	—

		s.	d.
Housings for steps and risers	each	0	11
Deal balusters, 1 in. × 1½ in.	per ft. run	0	9
Mahogany handrail : average, 3 in. × 3 in.	" "	6	0
Add if ramped	" "	12	0
Add if wreathed	" "	24	0

FIXING ONLY IRONMONGERY (INCLUDING SCREWS).

6 in. barrel bolts	8½d.	Rim locks	2/-
Sash fasteners	11½d.	Mortice locks	4/6
Casement fasteners	1/5	Patent spring hinges and letting into floor and making good	19/-
Casement stays	1/2		
Cupboard locks	1/5		

FOUNDER AND SMITH.

		s.	d.
Rolled steel joists	per cwt.	16	3
Plain compound girders	"	19	0
Do. stanchions	"	21	9
In roofwork	"	27	6

RAIN-WATER GOODS.

		3"	4"	5"	6"
Half-round plain rebated joints	ft. run	1/6	1/9	2/-	2/6
Ogee Do. Do.	"	1/9	2/-	2/6	3/3
Rain-water pipes with ears	"	1/9	2/7	—	—
Extra for shoes and bends	each	4/4	5/11	—	—
Do. stopped ends	"	1/11	2/4½	3/7	4/-
Do. nozzles for inlets	"	2/2	2/7	3/10	4/3

PLUMBER.

		s.	d.
Milled lead and laying in flashings and gutters	per cwt.	42	0
Do. Do. in flats	"	41	0
Extra labour and solder in coated cesspools	each	6	9
Welf joint	per ft. run	0	6
Soldered seam	" "	1	3
Copper nailing	" "	0	3

		½"	¾"	1"	1¼"	2"	4"
Drawn lead waste	per ft. run	1/2	1/9	2/-	3/4	4/-	—
Do. service	"	1/8	2/2	2/7	3/10	—	—
Do. soil	"	—	—	—	—	—	6/9
Bends in lead pipe	each	—	—	—	—	3/3	8/2
Soldered stop ends	"	1/2	1/8	2/1	2/10	3/6	—
Red lead joints	"	11d.	1/-	1/3	1/11	2/4	4/10
Wiped soldered joints	"	2/10	3/6	4/-	4/11	6/6	9/9
Lead traps and cleaning screws	"	—	—	—	14/7	19/6	—
Bib cocks and joints	"	6/4	9/7	15/4	41/-	—	—
Stop cocks and joints	"	15/4	17/2	25/8	64/-	—	—

PLASTERER.

		s.	d.
Render, float and set in lime and hair	per yard sup.	2	6
Do. Do. Sirapite	" "	2	9
Do. Do. Keen's	" "	4	0
Add saw lathing	" "	1	7
Add metal lathing	" "	2	6
(Not including hangers or runners, etc., for suspended ceilings.)			
Portland cement screed	" "	2	2
Do. plain face	" "	3	3
Mouldings in plaster	per 1 girth	0	1½
One-and-a-half granolithic pavings	per yard sup.	5	6

GLAZIER.

		s.	d.
21-oz. sheet plain	per foot sup.	0	8½
26-oz. Do.	" "	1	0
Obscured sheet	"	1	1
⅛-in. rolled plate	" "	0	9
¼-in. rough rolled or cast plate	" "	0	10½
¾-in. wired cast plate	" "	1	4

PAINTER.

		s.	d.
Preparing and distempering, 2 coats	per yard sup.	0	9
Knotting and priming	" "	0	7
Plain painting, 1 coat	" "	0	9
Do. 2 coats	" "	1	2
Do. 3 coats	" "	1	9
Do. 4 coats	" "	2	4
Graining	" "	2	3
Varnishing twice	" "	1	9
Sizing	" "	0	3
Flatting	" "	0	7
Enamel	" "	1	1
Wax polishing	per foot sup.	0	6
French polishing	" "	1	2
Preparing for and hanging paper	per piece, 2/- to 4/-		

*These prices apply to *new buildings only*. They cover superintendence by foreman and carry a profit of 10% on the prime cost without establishment charges; A percentage of 1½ should be added for Employers' Liability and National Health and Unemployment Acts and from 1s. 6d. per £100 for Fire Insurance. The whole of the information given on this page is copyright.

OBITUARY

Joseph A. Stenhouse.

The death has taken place at Sutton Courtenay, Berkshire, of Mr. Joseph A. Stenhouse. He was known in architectural circles in London, New York, Italy, and Spain. After serving his apprenticeship in Dundee, Mr. Stenhouse had a short spell in Aberdeen before joining a London firm. While in the Metropolis he was responsible for several blocks of West End mansions. Later he went to New York, where he specialised in sixteenth-century Spanish work, and designed Fifth-avenue mansions for many prominent business men. He also travelled extensively on the Continent. He retired to Sutton Courtenay a few years ago. He was 68 years of age.

Lt.-Col. J. Mitchell Moncrieff, C.B.E.

We regret to record the death of Lt.-Col. J. Mitchell Moncrieff, at the age of 66, on January 10, after a long and distinguished career as a consulting engineer and specialist in docks, harbours and bridges. He held a commission in the Royal Engineers, and was Director of Engineering Work in the Department of C.G.M.S., Admiralty, from 1917-1918, being awarded C.B.E. in 1918. One of Colonel Moncrieff's works was the Redheugh Bridge across the Tyne at Newcastle, which was erected to his designs about 30 years ago, and is said to be one of the most difficult feats of bridge engineering carried out in this country. When the Blackfriars Bridge disaster occurred in 1907, he was called in by Sir William Arrol and Co. to investigate and advise them regarding the causes of the accident. He was at one time external examiner in civil engineering to Sheffield University, and was the author of numerous papers on engineering subjects. It was as President of the Institution of Structural Engineers that Colonel Moncrieff was invited by the Ministry of Transport to organise the British Section of the International Congress for Reinforced Concrete which was held at Liége last September, and he was also a member of the Steel Research Committee of the Department of Scientific and Industrial Research.

Andrew Campbell.

We regret to announce the death, at the early age of 43, of Mr. Andrew Campbell. Mr. Campbell was managing director of Honeywill Brothers, Ltd., builders' material merchants, of 79, Mark Lane, E.C.3. The death occurred on January 16, at Guy's Hospital, following an operation. Mr. Campbell was buried on Sunday, January 18, at Kirkliston, near Edinburgh.

PATENTS

APPLICATIONS PUBLISHED.

338,864.—E. Freyssinet, and J. Seailles: Process for the manufacture of articles of reinforced concrete.

338,239.—Armstrong Cork Co.: Flexible masses adapted for use as floor coverings.

338,934.—E. Freyssinet, and J. Seailles: Process for the manufacture of reinforced concrete.

338,942.—J. S. Withers (Koehring Co.): Excavators.

338,856.—Scaffolding (Great Britain), Ltd., and D. Palmer-Jones: Means for connecting tubes together.

338,915.—A. V. Keller: Manufacture of decorative moulded objects.

338,961.—H. P. Paris: Transmit mixers for concrete.

338,893.—K. Nolte: Sheet piling.

339,055.—Babcock & Wilcox, Ltd. (Fuller Lehigh Co.): Blocks or tiles for furnace walls.

339,105.—W. Voss, and Vulcan-Feuerung Akt.-Ges.: Process of improving the working of lime and dolomite calcining kilns.

339,182.—G. Henderson, and W. M. Henderson: Apparatus for laying tile drains.

339,184.—Soc. Anon. des Anciens Etablissements Panhard & Levassor: Machines for the manufacture of floor boards.

Note.—Period for opposition expires February 10, 1931.

CLAY OR MARL ROOFING TILES

The British Standard Specification for Clay or Marl Plain Roofing Tiles, which has been issued by the British Engineering Standards Association, should prove of very great assistance to the claywork trades and the building industry alike. This publication is in three parts: (1) Specification, (2) Tests, and (3) Appendices, giving the methods for carrying out tests of rigidity, freezing, permeability and calculation of the number of tiles per square. Important points from the Specification are:—

Particles of lime, visible to the naked eye, either on a surface or a fracture, shall be a cause for rejection, unless the tiles have been so treated by *docking*, on removal from the kiln, that the lime has been water-slaked.

Hand-made tiles shall have not less than two nibs of a width not less than $\frac{3}{4}$ in., and a depth not less than $\frac{3}{8}$ in., and not more than $\frac{1}{2}$ in. Machine-made tiles shall have not less than two nibs of a width not less than $\frac{3}{4}$ in. at the base or a continuous nib of a depth not less than $\frac{1}{4}$ in. and not more than $\frac{1}{2}$ in. The hanging side of the nib shall be such that the tile will support itself when hanging vertically from a batten.

The size of standard hand-made and machine-made tiles shall be $10\frac{1}{2}$ in. by $6\frac{1}{2}$ in., with a plus variation not exceeding $\frac{1}{8}$ in. on the width and $\frac{1}{4}$ in. on the length.

Hand-made tiles shall not be less than $\frac{1}{2}$ in., and machine-made tiles shall not be less than $\frac{3}{8}$ in. thick. The camber of the former shall not be less than $\frac{3}{16}$ in. or more than $\frac{7}{16}$ in., and for the latter not less than $\frac{1}{8}$ in. or more than $\frac{1}{4}$ in.

The average breaking load applied along the centre line of a tile at right-angles to the length shall not be less than 175 and 125 lb., for hand-made and machine-made tiles respectively.

The whole publication is clearly and concisely set out, and should be in the hands of every manufacturer, vendor and purchaser. Price 2s. 2d., post free, it is obtainable from the Publications Department, B.E.S.A., 28, Victoria-street, S.W.1.

NEW COMPANIES

THE particulars quoted below have been compiled by Messrs. Jordan & Sons, Ltd., Company Registration Agents, of 116 and 117, Chancery-lane, W.C.2, from the documents available at the Companies' Registry.

M. GREENBERG & SON, LTD. (252,881). Registered December 19. 578/580, Prescot-road, Liverpool. Builders' merchants, manufacturers of and dealers in cement, plasters, artificial stone and builders' requisites, etc. Nominal capital, £3,000.

ALLHALLOWS-ON-SEA ESTATE, LTD. (252,862). Registered December 18. 296-302, High Holborn, W.C. To acquire certain lands and hereditaments at Allhallows, in the Hundred of Hoo, Kent, and builders, etc. Nominal capital, £60,000.

WINFIELD'S, LTD. (252,828). Registered December 17. 35, Charnwood-street, Derby. Builders' and timber merchants, sawyers, hard and soft wood dealers, etc. Nominal capital, £1,200.

CONTRACTS (MANCHESTER), LTD. (252,718). Registered December 13. The Hives, Mosley-road, Trafford Park, Manchester. Manufacturers and distributors of building and road materials of all kinds, etc. Nominal capital, £10,000.

BOWERS, LTD. (252,944). Registered December 22. 4, Paternoster-square, E.C.4. Builders and contractors, decorators, etc. Nominal capital, £2,000.

ROTHERFIELD PARK ESTATE CO., LTD. (253,039). Registered December 29. Rotherfield Park, Alton, Southampton. Land and estate owners, etc. Nominal capital, £2,319.

HUGH F. THOBURN, LTD. (253,052). Registered December 29. Kent House Estate Offices, adjoining Kent House Station, Beckenham, Kent. Auctioneers, house, land and estate agents, etc. Nominal capital, £1,000.

TENDERS

Communications for insertion under this heading should be addressed to "The Editor," and must reach him not later than Tuesday evening.

* Denotes *accepted*.
† Denotes *provisionally accepted*.
‡ Denotes *recommended for acceptance*.
§ Denotes *accepted subject to modifications*.
¶ Denotes *accepted by H.M. Office of Works and H.M. War Office*.

Aberdeenshire.—New house for the headmaster at Newburgh, for the E.C.:—

Mason—
*S. B. Russell, Affleck-street, Aberdeen £483 2 2
Joiner—
*Clark & Donaldson, Aberdeen ... 309 0 0
Plumber—
*Robert V. Pirie, Old Aberdeen ... 93 13 0
Plasterer—
*Robert Murdoch, Inverurie 180 4 6
Slater—
*Henry E. Randall, Hatton 123 10 7

Abingdon.—Water supply for parishes of Sutton Courtenay, Drayton, Steventon and Milton, for the R.D.C. Mr. Guthrie Allsebrook, Engineer, 25, Crown-street, Reading:—

*F. G. Hanney & Son, 19, Brynmill-avenue, Swansea ... £4,234 9 7

Bangor (N. Wales).—For 14 houses on the Euston-road housing scheme, for the City Council. Mr. B. Price Davies, F.S.I., City Surveyor:—

*Wm. Evans £4,956

Barrow-in-Furness.—New brick boundary wall at Blake-street playing field, for the Corporation. Mr. W. C. Persey, Borough Engineer, Surveyor and Architect:—

*Jos. Strickland, Barrow-in-Furness ... £1,170

Bedford.—(*a*) 12 non-parlour type cottages at Goldington, and (*b*) 8 non-parlour type at Wymington, for the R.D.C. Mr. F. R. Chapman, Surveyor:—

(*a*)	*Cottages.*	*Roads.*	*Total.*
H. Fidler, Luton	£4,830	... £460	... £5,290
Jacobs & Burton, Bedford	4,981	... 221	... 5,202
R. Marriott, Rushden	4,770	... 327	... 5,097
Seymore & Tookey, Stotfold	4,461	... 243	... 4,704
Townsend & Watts, St. Neots	4,280	... 170	... 4,450
Beaumont & Taylor, Henlow	4,139	... 174	... 4,313
Saunderson, Bedford ...	3,998	... 250	... 4,248
*C. Hutchinson, Potton	3,904	... 187	... 4,091

(*b*)	*Cottages.*	*Sewers, etc.*	*Total.*
J. C. Tarry, Newport Pagnall	£2,956	... £70	... £3,026
Townsend & Watts, St. Neots	2,845	... 130	... 2,975
C. Clayson & Son, Harrold	2,785	... 186	... 2,972
W. Packwood, Rushden	2,747	... 167	... 2,914
R. Marriott, Rushden	2,780	... 107	... 2,887
Ansell & Brown, Northampton	2,804	... 68	... 2,872
*W. Thompson & Son, Irthlingboro	2,564	... 146	... 2,710

Billericay.—18 cottages at Foundry Field, Laindon-road, for the R.D.C. Mr. H. B. Mayhew, Surveyor:—

*F. A. Fordham, Laindon £4,975

Bingley.—For sports pavilion at the Boys' School Fields, for the Governors of the Bingley Grammar School. Mr. H. Wormald, A.R.I.B.A., Education Architect, County Hall, Wakefield:—

*Cowling Brothers, Silsden.

Birmingham.—Shop front at Corporation-street, Birmingham:—

*A. Edmonds & Co., Ltd., Constitution-hill, Birmingham.

Burntisland.—Thirty-two houses of two and three apartments at Rossend, for the T.C. Mr. James A. Waddell, Burgh Surveyor, Burntisland. Quantities by C. R. Douglas & Son, Dunfermline:—

Builders—
Frank Walker, Kirkcaldy £4,015 17 1½
*Richard Dunlop, Dunfermline ... 3,864 11 1
Joiner—
T. Nimms & Son, Burntisland ... 2,117 5 10
W. J. Duvar, Burntisland 2,095 9 4
*David Martin, Burntisland 2,060 1 4
Slater—
John Ross, Burntisland 818 1 11½
J. Robertson & Sons, Dunfermline 806 6 9
*T. B. Stobie & Son, Buckhaven 801 9 9½
Plasterer—
Lind Bros., Lochgelly 804 13 7
*T. B. Stobie & Son, Buckhaven 747 1 5½
Plumber—
Thomas Matheson, Polmont 913 12 2
*Robert Shaw, Glasgow 846 10 8
Glazier—
*Wm. Marshall, Edinburgh 64 16 8½
Painter—
*A. Campbell & Co., Yoker 221 3 10½
Railings—
*Thomson Bros., Kirkcaldy 103 8 2

Blackpool.—Erection of buildings in Wood-street and Edward-street, Blackpool, for Liverpool and London and Globe Insurance Co., Limited. Mr. J. C. Derham, architect, Tower-chambers, Church-street, Blackpool:—

*Sir Lindsay Parkinson & Co., Ltd., Blackpool.

Brigg.—(*a*) 12 houses at Kirton Lindsey, and (*b*) 8 at Winteringham, for the R.D.C.:—

(*a*) *H. E. Goates, Broughton £3,540 10
(*b*) *Gilding & Hill, Winterton 2,445 18
(Subject M.H. approval.)

Burton-on-Trent.—For heating the Administration Block extension, etc., at the hospital, for the T.C.:—

*Jerram & Co., Derby £627 3

Chesterfield.—For the reconstruction of Tapton House, for the T.C.:—

*G. Beresford & Sons £5,174

Derby.—New junior school in Wyndham-street, Alvaston, for the Education Committee. Mr. C. H. Aslin, A.R.I.B.A., Architect, Town Hall:—

*W. Ford & Sons, Derby £20,590

Dewsbury. — Reinforced concrete reservoir of 2,000,000 gallons capacity, etc., for the C.B. Mr. G. E. V. Boldry, M.I.C.E., Water Engineer, Corporation Waterworks Offices, Church-street, Dewsbury:—

*J. G. Pearson, Dewsbury £13,289

Dunmow.—8 houses at Hatfield Heath, for the R.D.C.:—

— Goodey £2,670 17

Fareham.—Twelve houses on housing site, Gordon-road, for the U.D.C. Mr. H. T. Privett, Surveyor:—

*E. Rowell, Western-road, Fareham ... £4,487

Friern Barnet.—For sewage disposal works, for the U.D.C.:—

*Mounyer British Construction Co., Ltd. £11,166

Goole.—For 43 houses on Marshfield site, 26 on Morley-street site, and 6 on Colonel's-walk site, for the U.D.C.:—

G. T. Farrow, Doncaster £25,264

Great Yarmouth.—For repairing and reglazing the roof of the Winter Gardens, for the T.C.:—

*Standard Patent Glazing Co., Ltd., Westminster, S.W.1. ..... £1,330 19

Grimsbury, Oxon.—Restoration of St. Leonard's Church, recently damaged by fire. Mr. T. Lawrence Dale, diocesan surveyor, architect, 358, Woodstock-road, Oxford:—

*T. H. Kingerlee & Sons, Oxford £1,497

Hackney.—For the provision of new urinal stalls and relaying of tiled floor to conveniences in the King's Hall, etc., for the B.C.:—

Runham Brown Bros., Downs-road, E.5	£230 18
G. Stoddart & Sons, Stoneham-road, E.5	197 2
W. Silk & Son, Ltd., High-street, E.9	183 0
Wm. Shurmur & Sons, Ltd., Riverside Works, E.5	168 0
W. M. Brand, Oldhill-street, N.16	154 0
*Ernest Setchell, Dalston-lane, E.8	142 0

Hackney.—For painting the interior work of the men's second-class swimming-bath at the Central Baths:—

Runham Brown Bros., Downs-road, E.5	£691 10 2
C. P. Roberts & Co., Ltd., High Holborn, W.C.1	690 5 3
E. A. Roome & Co., Ltd., Crown Works, E.9	667 8 6
Wm. Shurmur & Sons, Riverside Works, E.5	666 6 9
W. Silk & Son, Ltd., High-street, E.9	646 4 2
L. H. & R. Roberts, Lower Clapton-road, E.5	592 0 0
W. M. Brand, Oldhill-street, N.16	533 0 0
Ernest Setchell, Dalston-lane, E.8	494 10 0
*G. Stoddart & Sons, Stoneham-road, E.5	463 2 8

Hambledon.—(*a*) Two houses at Bramley; (*b*) twelve at Cranleigh; and (*c*) seven at Witley, for the R.D.C. Mr. P. G. Williams, Surveyor:—

(*a*) *A. Grove, Guildford, Surrey £805 0
(*b*) *Enticknap Bros., Witley, Surrey 4,494 0
(*c*) *Withall, Oxborough & Charman, Godalming, Surrey 2,537 15

Hastings.—(*a*) For 110 houses at Hollington No. 2 site, (*b*) two houses at Broomgrove, for the T.C. The Borough Engineer:—

(*a*) *M. J. Gleeson, Ltd., Sheffield	£40,708 16 6
(*b*) *M. J. Gleeson, Ltd., Sheffield	747 18 6

Hinckley.—(*a*) 30 houses at Earl Shilton; (*b*) 6 at Sapcott, for the R.D.C. Mr. E. H. Crump, housing architect:—

(*a*) *R. H. Simmonds, Hinckley £10,410
(*b*) *R. H. Simmonds, Hinckley ... 2,052

Kearsley.—Alterations to the "Grapes Inn," Kearsley, for the Cornbrook Brewery Co., Ltd., Chester-road, Cornbrook, Manchester. Mr. S. Metcalfe, Brewer's resident architect, Cornbrook Brewery Co., Ltd.:—

*A. Bradshaw, Ltd., Prestwich, Manchester.

Leeds.—Demolition of existing buildings and erection of new offices and stores at the junction of South Brook-street and Hunslet-road, for Messrs Joshua Tetley & Sons, Ltd., The Brewery, Leeds. Messrs. Kirk and Tomlinson, F. and L.R.I.B.A., architects, 63, Albion-street, Leeds:—

*Wm. Nicholson & Sons (Leeds), Ltd.

Leicester.—Nursery school in Taylor-street, for the Education Committee. Messrs. Brown & Jones, architects, Spencer-chambers, 4, Market-place, Leicester:—

*Walter Potter, Leicester.

Letchworth.—For new premises to be built in Eastcheap, Letchworth, for the India Super Tyre, Herts and Beds, Ltd. Messrs. Bennett & Bidwell, Letchworth, Architects:—

J. T. Openshaw, Letchworth	£3,740 0 0
Redhouse & Son, Stotfold	3,730 0 0
T. Raban & Son, Baldock	3,650 0 0
H. Hurst, Letchworth	3,535 0 0
Beckley & Turpie, Letchworth	3,337 6 8
*J. Ray, Ltd., Letchworth	3,310 0 0

Littlehampton.—For 36 houses on North Hamroad estate, for the U.D.C.:—

*A. Clare & Co., Ltd., Worthing ... £12,600

Liverpool.—For laying the water lines from Wern Ddu to River Rhaiadur, etc., for T.C.:—

*Sir William Prescott & Sons, Tottenham, London £51,729

Liverpool.—For the erection of dressing pavilions, etc., on the Walton Clubmoor estate, for the T.C. Land Steward and Surveyor:—
John Rimmer, Low-hill, Liverpool ... £3,050

Liverpool.—Erection of a tea-house and conveniences at Otterspool-gardens, for the T.C. Land Steward and Surveyor:—

*Turner & Moss, Garston, Liverpool ... £3,759

Liverpool.—34 houses on the Larkhill estate, for the T.C.:—

*Walter Spencer, Aintree £15,300
(Subject M.H. approval.)

Liverpool.—For 588 houses and 4 flats on the Dovecote estate, for the T.C.:—

*Unit Construction Co., Ltd., Adelphi, W.C.2 ..... £203,874
(Subject M.H. approval.)

London (Ealing).—For the construction of a new infants' department on the Grange site, for the T.C.:—

F. Parvin, Ltd., Mill Hill	£20,100
H. W. Wagstaff & Sons, Holborn, E.C.4	19,640
Limpus & Son, Kingston-on-Thames	19,600
W. J. Marston & Son, Fulham, S.W.6	18,985
Evan Thomas & Sons, Neath	18,900
Hammond & Barr, Ltd., Chelsea, S.W.3	18,691
H. H. & F. Roll, Ltd., Epsom	18,611
T. Millman, Ealing	18,569
A. Roberts & Co., Ltd., Kensington, W.8	18,308
C. H. Gibson, Ltd., Croydon	18,222
F. D. Hidden & Co., Ltd., Brentford	18,134
H. Norris & Son, Ltd., Hertford	18,118
Bridge & Co., Brixton	17,963
W. H. Cooper & Son, Hammersmith, W.6	17,888
Canonbury Construction Co., N.1	17,706
Perry's (Ealing), Ltd., Ealing	17,698
Ashford Builders Co., Ltd., W.C.1	17,639
Hall, Beddall & Co., Ltd., Waterloo Bridge, S.E.1	17,616
Y. J. Lovell & Sons, Gerrards Cross	17,453
Thorogood Bros. & Sons, Surbiton	17,398
Halse & Sons, Ltd., W.1.	17,318
F. Liley & Sons, Croydon	17,181
E. A. Russell, Ltd., Walthamstow	17,145
J. & R. Thompson, Acton, W.3	16,997
W. J. Dickens, Ealing	16,900
G. H. Dibblin, Dartford	16,826
A. & B. Hanson, Southall	16,700
S. E. Adams, Westcliff-on-Sea	16,346
*F. G. Taylor, West Ealing	15,900

ESTIMATING ON RIGHT LINES

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¶London.—The following works contract has been placed by the War Office during the week ended January 15:—

Chatham—artificers' work—H. Goodsell, Maidstone.

¶London.—The following contracts have been let by H.M.O.W. for week ending January 17:—

Dartmouth C.G.S.—alterations, etc.—R. Pillar & Son, Dartmouth.
British Museum Repository Extension, Hendon—steel casements—Humphries, Jackson & Ambler, Ltd., Cornbrook, Manchester.
Sowerby Bridge E.E.—erection—Binksley & Son, Greenberfield-lane, Barnoldswick.
Natural History Museum—insect cabinets—G. Betjeman & Son, Ltd., Pentonville-road, N.1.
Huntley Castle—repairs to roads—King & Co., Ltd., Clyde-street, Glasgow.
Glasgow Central E.E. and I.R.O.—steel casements, etc.—Doodson & Bain, Ltd., Openshaw, Manchester.

Manchester.—For erection of the new Astoria Super-Cinema at Heaton Park, Manchester. Messrs. Charles Swain and Partners, Lloyd's Bank Buildings, 53, King Street, Manchester, arcnitects:—

Builders—*J. Gerrard & Sons, Ltd., Manchester.
Plastering—*J. Cadman & Sons, Ltd., Swinton.
Asphalting—*R. H. Lord, Pendleton.
Slating—*F. Brown & Son, Ltd., Walkden.
Concrete steps—*Simpson Brothers, Salford.
Masonry—*F. M. & H. Nuttall, Ltd., Manchester.

Manchester.—Additions to works, Weber-street, off Inkerman-street, Collyhurst, for Messrs. Rambottom, Lyons & Co., Ltd., paper manufacturers, Nicholas Croft, Manchester. Messrs. W. Telford Gunson & Son, F.R.I.B.A., 10, Marsden-street, Manchester:—

Builders—*W. Gornall & Sons, Ltd., Salford.
Steelwork—*Homan and Rogers, Manchester.
Masonry—*Bolton Stone, Concrete and Asphalte Co., Ltd., Bolton.
Joiner—*Stanley Porter, Bolton.
Plumber and glazier—*T. Ballantyne & Co., Manchester.
Slater—*W. Royle & Co., Manchester.
Painter—*John Gibbons & Son, Manchester.

Manchester.—Railways, unloading docks, sheep pens, etc., at new cattle and sheep market, Mode Wheel, Weaste, for Markets Committee. Mr. B. Meek, City Engineer, Town Hall:—

Builders—*Geo. Clarke & Sons (Manchester), Ltd., Manchester.

Manchester.—Additions to offices and works in Grant-street, Blackley, for British Dyestuffs Corporation, Ltd., Hexagon House, Blackley. Plans by the resident architect:—

*J. Gerrard & Sons, Ltd., Manchester.

Market Harborough.—6 houses on the Mowsley site, for the R.D.C.:—

*H. V. Batchelor £2,038

Mayo.—For intake works, pumping station, rising main, service tank, cast-iron main and distribution pipes, fencing, etc., for the County Board of Health. Mr. P. H. McCarthy, B.A.I., M.Inst.C.E.I., Consulting Engineer, 26, Lower Leeson-street, Dublin:—

*Thomas J. Reid, Ballina £4,797

Normanton (Yorks).—Showroom and office in connection with electric-lighting undertaking, for the U.D.C. Mr. W. F. Copp, Surveyor, Council Offices, Normanton, Yorks:—

*Robert Leake & Sons, Normanton ... £621 15

North Berwick.—Cutting tracks and laying and jointing about 1¼ miles of 9-in. and 6-in. pipes and relative works, for the T.C. Messrs. J. & A. Leslie & Reid, C.E., 72a, George-street, Edinburgh:—

*Casey & Darragh, 16, King-street, Stirling £1,490

North Witchford.—6 houses on site at Doddington, for the R.D.C. Messrs. Fovargue & Jakens, architects, The Causeway, March:—

P. Taylor, Sutton	£2,469 6 6
Turner & Son, March	2,430 0 0
Pettitt & Sons, Ramsey	2,425 0 0
L. Wilkinson, March	2,412 0 0
*T. W. Dack, Doddington	2,342 12 6

Portsmouth.—For rebuilding "Coach and Horses" P.H., for the Portsmouth & Brighton United Breweries, Ltd. Messrs. A. E. Cogswell & Sons, architects, Portsmouth:—

	Estimate No. 1.		*Estimate No. 2.*
(*a*) Hunt, Ltd.	£12,106 0 0		£2,049 0 0
Porter & Son	11,600 0 0		1,653 0 0
S. A. Evans	11,850 0 0		1,200 0 0
F. Bevis, Ltd.	11,480 0 0		1,550 0 0
Davis & Sons	11,496 0 0		1,475 0 0
Salter	11,581 0 0		1,281 0 0
J. Croad, Ltd.	11,244 0 0		1,468 0 0
Rice & Son	10,983 0 0		1,633 0 0
L. Hoad	11,076 0 0		1,466 0 0
Clear & Sons	11,090 11 2		1,425 9 10
Green & Foley	10,830 0 0		1,380 0 0
Lay & Co.	10,568 0 0		1,417 0 0
E. & A. Spriggings	10,472 0 0		1,485 0 0
Roy Corke, Ltd.	10,559 0 0		1,346 0 0
(*b*) *Howe & Bishop	9,997 0 0		1,172 0 0

(*a*) Highest, £14,155.
(*b*) Lowest, £11,169.

Preston.—24 non-parlour type houses, for the C.B. Mr. W. Platt, Borough Engineer and Surveyor, Birley-street, Preston:—

*A. Threfall, Leyland, near Preston.

Scarborough.—For alterations to the Floral Hall, for the Town Council. Mr. Harry W. Smith, A.M.I.C.E., Borough Engineer:—
*Jaram & Son, Scarborough.

Shardlow.—For sewerage extension scheme, Sandiacre, for the R.D.C.:—
*Bentley & Wardman £2,420 10

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Reigate.—For the erection of eight blocks of four non-parlour houses in Lyndhurst-road, South Park, for the T.C.:—

W. F. Goodchild, London, S.W. ...	£16,759	0
Bacon & Sons, Coulsdon	16,730	0
Cook, Sons, Ltd., Crawley	16,500	0
East Kent Building Co., Dover ...	16,488	9
Bridge & Co., Brixton	16,144	0
Geo. Martin, Redhill	14,900	0
Tamworth Park Const. Co., Mitcham	14,590	0
Wilkinson, Dorking	14,377	0
Chas. Payne, Reigate	13,920	0
C. D. Wellicome, Redhill	13,220	0
Atkinson & Potter Bros., Reigate	12,993	0
Bartley & Ward, Crawley	12,956	0
Pink & Oram, Redhill	12,819	0
Punter & Le Clerq, Farnham	12,580	0
J. W. Saunders, Beckenham	12,419	18
*Huxley & Jenkins, Greenford ...	12,160	0

(Subject to M.H. approval.)

Shoreham.—For erection of a mortuary, P.-M. rooms at Little High-street depôt, for U.D.C.:—
*Limpus & Son, Hove £537 10 5

Shrewsbury.—For 22 houses, including drainage, on the New Park-road site, for the Town Council:—
*W. E. Deakin, Shrewsbury £7,290

South Stoneham.—15 pairs of houses at Netley Hound, for the R.D.C. Mr. W. R. Cowell, architect, "Fernlea," Hedge End, Hants:—

	Per house.
H. G. Ross, Netley	£378
Hodder & Haighton, Netley	370
Rawlings & Knowles, Netley	365
L. Blackman, Botley	364
Joy & Willcocks, Kent	353
*Building & Public Works Construction Co., County Works, Swindon	349

Stirlingshire.—New bridge over the Forth at Gargunnock, for Joint Committee with Stirlingshire:—
*M'Kean & Renwick, Glasgow £3,651

Stow-on-the-Wold.—16 houses on Mr. Taylor's site at Bourton-on-the-Water for the R.D.C. Mr. Daft, architect:—
*Talbot Ellens, Stow-on-the-Wold £5,824

Swansea.—For the erection of Kilvey senior school, for the Swansea E.C. The Borough Architect:—
*Griffith Davies & Co., Swansea £53,081

Tadcaster.—20 houses at Sherburn-in-Elmet, for the R.D.C. Mr. Harold W. Boardman, surveyor and engineer:—
*W. Firth, Ltd., Doncaster.
(Subject to M.H. approval.)

Wallsend.—25 houses in flats, for Wallsend T.C. Mr. J. Blench, surveyor:—
*Gordon Durham, E. Beldon.

Wednesbury.—For 46 houses at Fallings Heath, for the U.D.C.:—
*Housings, Ltd. £17,627

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Winsford.—Extensions to Winsford County Secondary school, for the Chester Education Committee. Mr. F. Anstead Browne, F.R.I.B.A., County Architect, Newgate-street, Chester:—
*Fowles & Sons, Winsford, Cheshire.

Worcester.—New nurses' home at Worcester Infirmary, for the Committee:—
*J. Wood & Son £15,286

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